State:	*District of Columbia*	**Filing Company:**	*United of Omaha Life Insurance Company*
TOI/Sub-TOI:	*L09I Individual Life - Flexible Premium Adjustable Life/L09I.101 External Indexed - Single Life*		
Product Name:	*Universal Life PBR 2019*		
Project Name/Number:	*Universal Life Principle Based Reserving 2019/UL PBR 2019*		

Filing at a Glance

Company:	United of Omaha Life Insurance Company
Product Name:	Universal Life PBR 2019
State:	District of Columbia
TOI:	L09I Individual Life - Flexible Premium Adjustable Life
Sub-TOI:	L09I.101 External Indexed - Single Life
Filing Type:	Rate
Date Submitted:	11/13/2019
SERFF Tr Num:	MUTM-132153915
SERFF Status:	Submitted to State
State Tr Num:	
State Status:	
Co Tr Num:	PDAFUL-3246
Implementation Date Requested:	On Approval
Author(s):	Helen Curry, Kim Meyerring, Mary Gregg, Brenda Dawson, Julie Cortez, Ann Collins
Reviewer(s):	
Disposition Date:	
Disposition Status:	
Implementation Date:	

State:	*District of Columbia*	*Filing Company:*	*United of Omaha Life Insurance Company*
TOI/Sub-TOI:	*L09I Individual Life - Flexible Premium Adjustable Life/L09I.101 External Indexed - Single Life*		
Product Name:	*Universal Life PBR 2019*		
Project Name/Number:	*Universal Life Principle Based Reserving 2019/UL PBR 2019*		

General Information

Project Name: Universal Life Principle Based Reserving 2019	Status of Filing in Domicile:
Project Number: UL PBR 2019	Date Approved in Domicile:
Requested Filing Mode: Informational	Domicile Status Comments:
Explanation for Combination/Other:	Market Type: Individual
Submission Type: Resubmission	Previous Filing Number: MUTM-132126126
Individual Market Type:	Overall Rate Impact:
Filing Status Changed: 11/13/2019	
State Status Changed:	Deemer Date:
Created By: Mary Gregg	Submitted By: Mary Gregg
Corresponding Filing Tracking Number:	

Filing Description:

RE: United of Omaha Life Insurance Company
NAIC # 261-69868
Company Number - UL PBR 2019

Individual Flexible Premium Adjustable Life Insurance
Implementation of 2020 Principle-Based Reserving
Actuarial Memorandum

This letter serves as notification of our election of the 2020 Principle Based Reserving for United of Omaha's universal life products. This election is effective January 1, 2020. Policy language is not affected by this election. The only updates relating to the 2020 Principle Based Reserving is to the actuarial memorandums attached in this filing, however for your convenience the related policy form filing approval information is listed below.

FORM NUMBER: D499LDC14P, D500LDC14P, D534LDC14P, D535LDC14P, SERFF Filing Number MUTM-130018319, Approval Date 04/15/2015

FORM NUMBER: D421LNA13P, D422LNA13P, SERFF Filing Number MUTM-129254618, Approval Date 11/27/2013

FORM NUMBER: D187LNA10P, D188LNA10P, SERFF Filing Number MUTM-127004525, Approval Date 02/16/2011

FORM NUMBER: D998LNA06P, A999LNA06P, SERFF Filing Number FRCS-125090978, Approval Date 03/2/2007

Thank you for updating your records accordingly.

If you have any questions or concerns, please contact Kimberly A. Meyerring at 402-351-6258 or kim.meyerring@mutualofomaha.com.

Company and Contact

Filing Contact Information

Kim Meyerring, Policy Drafting and   kim.meyerring@mutualofomaha.com
Regulatory Specialist

State:	*District of Columbia*	*Filing Company:*	*United of Omaha Life Insurance Company*
TOI/Sub-TOI:	*L09I Individual Life - Flexible Premium Adjustable Life/L09I.101 External Indexed - Single Life*		
Product Name:	*Universal Life PBR 2019*		
Project Name/Number:	*Universal Life Principle Based Reserving 2019/UL PBR 2019*		

Mutual of Omaha   402-351-6258 [Phone]

Mutual of Omaha Plaza   402-351-5298 [FAX]

Omaha, NE 68175

Filing Company Information

United of Omaha Life Insurance
Company
3300 Mutual of Omaha Plaza
Omaha, NE 68175
(402) 351-2645 ext. [Phone]

CoCode: 69868
Group Code: 261
Group Name:
FEIN Number: 47-0322111

State of Domicile: Nebraska
Company Type: Life
Insurance
State ID Number:

Filing Fees

Fee Required?   No

Retaliatory?   No

Fee Explanation:

State:	District of Columbia
TOI/Sub-TOI:	L09I Individual Life - Flexible Premium Adjustable Life/L09I.101 External Indexed - Single Life
Product Name:	Universal Life PBR 2019
Project Name/Number:	Universal Life Principle Based Reserving 2019/UL PBR 2019

Filing Company: United of Omaha Life Insurance Company

Supporting Document Schedules

Satisfied - Item:	Actuarial Justification
Comments:	
Attachment(s):	2019 IUL Protector ACTMEMO - DC Version - CVAT - Unisex.pdf 2019 IUL Protector ACTMEMO - DC Version - CVAT.pdf Accum Answers ACTMEMO - DC Version - Unisex.pdf Accum Answers ACTMEMO - DC Version.pdf Additional Insured Rider - Self - ACTMEMO - DC.pdf GUL ACTMEMO - Compact Version - Sex Distinct - 2017 CSO.pdf GUL ACTMEMO - Compact Version - Unisex - 2017 CSO.pdf GULE ACTMEMO - IC - Sex Distinct - 2017 CSO.pdf GULE ACTMEMO - IC - Unisex - 2017 CSO.pdf Additional Insured Rider - Other - ACTMEMO - DC.pdf IUL1 ACTMEMO - DC Version - 2017 CSO.pdf IUL1 ACTMEMO - DC Version - CVAT - 2017 CSO.pdf IUL1 ACTMEMO - DC Version - Unisex - 2017 CSO.pdf IUL1 ACTMEMO - DC Version - Unisex - CVAT - 2017 CSO.pdf
Item Status:	
Status Date:	

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
IUL Protector – Unisex
Form D631LDC17P

I.   INTRODUCTION

Product Description: Flexible Premium Index-Linked Universal Life Insurance payable at death. Maturity is at age 120. The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited. There are multiple index-linked accounts and a fixed interest option from which the owner may choose to allocate premiums. Premiums will be allocated initially to a short term holding account which will receive interest at the same rate as the fixed interest account. On a sweep date, the premium will be allocated to the fixed interest and index linked accounts in proportions designated by the owner.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Charges other than premium loads are distributed across the different segments and accounts on a pro-rata basis. The pro-rata amount is determined by the segment, short term holding account, and fixed interest account values at the time of the deduction in proportion to the total accumulation value. For purposes of calculating the net amount at risk, the accumulation value is determined by summing segment values, fixed interest accumulation value, and the short term holding account value.

Surrender charges will not change from those shown in Appendix C. Surrender charge rates are applied to the current specified amount.

We credit fixed interest using a portfolio-year method. Credited interest is guaranteed to be not less than 2% for the fixed interest account and 0% for the index-linked accounts. Current credited fixed interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread. Interest on Index Linked accounts are credited at the segment maturity date. The amount credited is the index value at the segment maturity multiplied by the segment index rate. The segment index rate being the following:

$$\frac{Index_{End\ of\ Segment} - Index_{Beginning\ of\ Segment}}{Index_{Beginning\ of\ Segment}} \times Participation\ Rate$$

The segment index rate is subject to the cap set at the beginning of the segment and floor set at issue. The different index strategies are as follows, if there is a change in the future a new actuarial memorandum will be supplied.

Index Strategy	Index	Guar Min Par Rate	Guar Min Segment Cap	Guar Min Floor Rate	Segment Length	Crediting Method
One Year 100% Participation	S& P 500	100%	3.00%	0.00%	12 Months	Point to Point
One Year High Participation	S& P 500	110%	2.50%	0.00%	12 Months	Point to Point
One Year Uncapped	S& P 500	20%	None	0.00%	12 Months	Point to Point

This product incorporates two traditional cumulative no-lapse provision. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premium accumulated at 2% to determine if the No-Lapse Protection continues. While the No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
      Short Term No-Lapse Protection Guarantee Period: Minimum (10, Maximum (5, 85 – Issue Age))
      Long Term No-Lapse Protection Guarantee Period: Maximum (5, 85 – Issue Age)

Two types of loans are available. The first is a standard loan. When selected, the standard loan will require sufficient value within the fixed interest account to cover any loan amount. If there is insufficient value, the policy will transfer the necessary funds to the fixed account on a pro rata basis from the index account. The loan will be credited at the guaranteed interest rate of the fixed account and charged interest based on the schedule in the contract.

The second loan type is an indexed loan. Interest will be credited in accordance with the fixed or indexed account return. The index loan will be charged interest at a declared rate set by the company but not to exceed the maximum rate set in the contract.

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $100,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Definition of life insurance will be set based on the Cash Value Accumulation Test. There are two death benefit option types available, level and increasing.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in

Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. For attained ages less than 16, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 16 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table but do not exceed $\frac{1-(1-q_x)^{\frac{1}{12}}}{(1-q_x)^{\frac{1}{12}}}$. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC   = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum\limits_{2}^{20} Charges_t}{19}$$

Where Charges$_t$ = PercentOfPremLoad$_t$ * Prem$_t$ + (UnitLoad$_t$ * Units + perPolicyLoad$_t$)*12

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 120)

$$E = 10 + 1.25 \cdot \min\left[\begin{array}{c} P_x^{NNL} \\ 40 \end{array}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$$E \cdot \frac{\ddot{a}_{x+t}}{\ddot{a}_x}$$, where $\ddot{a}_{x+t}$ and $\ddot{a}_x$ are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by risk class, the unamortized unused initial expense allowances must differ by risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Standard Nontobacco
$100,000 specified amount
4.00% credited interest
annual premium = $689

$$\text{IAEC} = \left[689 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[689 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$$P_{35}^{NNL} = 14.71$$

$$E = 10 + 1.25 \cdot \min\left[\begin{array}{c} 12.82 \\ 40 \end{array}\right] = 26.02$$

$_tAV$ = Accumulation value at the end of year t

$_tCSV$ = Cash surrender value at the end of year t

$_tSC$ = Surrender charge for year t

$$_5AV = 2{,}333$$

$$_5SC = 1{,}900$$

$$_5CSV = {_5AV} - {_5SC} = 2{,}333 - 1{,}900 = 433$$

$_5SC^{max}$ = maximum allowable surrender charge in 5th duration
based on E, for a \$100,000 policy.

$$_5SC^{max} = 100 \cdot E \cdot \frac{\ddot{a}_{40}}{\ddot{a}_{35}} = 100 \cdot 26.02 \cdot \frac{28.9151}{30.8410} = 2{,}602 \cdot .93755 = 2{,}440 > 1{,}900$$

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly Per $1,000 Net Amount at Risk

AGE	Nont	Tob	AGE	Nont	Tob	AGE	Nont	Tob
0	0.0203		51	0.1947	0.3876	102	33.5332	33.7080
1	0.0123		52	0.2137	0.4214	103	35.3533	35.4953
2	0.0102		53	0.2340	0.4581	104	37.0868	37.1994
3	0.0093		54	0.2553	0.4997	105	38.7007	38.7868
4	0.0087		55	0.2758	0.5465	106	40.4388	40.5084
5	0.0082		56	0.2950	0.5983	107	42.6132	42.6813
6	0.0082		57	0.3147	0.6569	108	44.9015	44.9676
7	0.0073		58	0.3360	0.7232	109	47.3095	47.3732
8	0.0073		59	0.3615	0.7996	110	49.8432	49.9040
9	0.0073		60	0.3930	0.8873	111	52.5082	52.5656
10	0.0082		61	0.4342	0.9888	112	55.3105	55.3641
11	0.0088		62	0.4813	1.1029	113	58.2560	58.3052
12	0.0107		63	0.5355	1.2284	114	61.3505	61.3948
13	0.0148		64	0.5942	1.3668	115	64.6000	64.6387
14	0.0218		65	0.6577	1.5175	116	68.0097	68.0419
15	0.0318		66	0.7252	1.6770	117	71.5850	71.6103
16	0.0443		67	0.7993	1.8445	118	75.3288	75.3464
17	0.0575		68	0.8820	2.0251	119	79.2452	79.2544
18	0.0588	0.0651	69	0.9778	2.2242	120	0	0
19	0.0608	0.0682	70	1.0912	2.4502			
20	0.0620	0.0704	71	1.2253	2.7077			
21	0.0620	0.0724	72	1.3833	2.9940			
22	0.0607	0.0741	73	1.5655	3.3044			
23	0.0600	0.0760	74	1.7723	3.6298			
24	0.0600	0.0787	75	2.0015	3.9610			
25	0.0580	0.0789	76	2.2548	4.2930			
26	0.0507	0.0775	77	2.5370	4.6294			
27	0.0470	0.0761	78	2.8565	4.9793			
28	0.0462	0.0746	79	3.2260	5.3565			
29	0.0438	0.0741	80	3.6562	5.7726			
30	0.0428	0.0752	81	4.1420	6.2204			
31	0.0458	0.0792	82	4.6893	6.7772			
32	0.0493	0.0852	83	5.3228	7.4866			
33	0.0547	0.0916	84	6.0793	8.2985			
34	0.0635	0.0994	85	6.9545	9.2236			
35	0.0737	0.1087	86	7.9392	10.2625			
36	0.0847	0.1196	87	9.0623	11.4185			
37	0.0953	0.1317	88	10.3113	12.6663			

38	0.1038	0.1454	89	11.6595	13.9726
39	0.1097	0.1633	90	13.0783	15.3070
40	0.1145	0.1816	91	14.5312	16.6289
41	0.1207	0.2008	92	15.9983	17.9197
42	0.1273	0.2188	93	17.4382	19.1483
43	0.1340	0.2348	94	18.7948	20.2596
44	0.1382	0.2463	95	20.2425	21.4438
45	0.1425	0.2592	96	21.9280	22.8849
46	0.1478	0.2749	97	23.7452	24.4710
47	0.1535	0.2920	98	25.6970	26.2187
48	0.1607	0.3115	99	27.7465	28.0986
49	0.1688	0.3331	100	29.7623	30.0118
50	0.1795	0.3586	101	31.6583	31.8690

Appendix B

Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance IUL Protector – Unisex.xlsm"

Appendix C

Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges IUL Protector – Unisex.xlsm"

Appendix D

Guaranteed Monthly Unit Loads per 1,000 Specified Amount
Insert "Unit Loads IUL Protector – Unisex.xlsx"

Appendix E

Minimum Guaranteed Cash Value
Standard Nontobacco, $689 Annual Premium, Issue age 35, $100,000 Specified Amount
100% allocated to 100% Participation Indexed Account

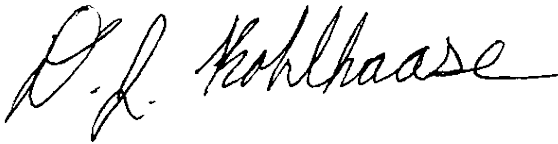| Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$168	$0	$100,000
2	$330	$0	$100,000
3	$485	$0	$100,000
4	$633	$0	$100,000
5	$774	$0	$100,000
6	$905	$0	$100,000
7	$1,024	$0	$100,000
8	$1,129	$0	$100,000
9	$1,217	$117	$100,000
10	$1,286	$386	$100,000
11	$1,334	$634	$100,000
12	$1,361	$861	$100,000
13	$1,369	$1,069	$100,000
14	$1,360	$1,260	$100,000
15	$1,331	$1,331	$100,000
16	$1,276	$1,276	$100,000
17	$1,190	$1,190	$100,000
18	$1,065	$1,065	$100,000
19	$897	$897	$100,000
20	$674	$674	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

      In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

      I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the actual excess first year expenses is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
IUL Protector – Sex Distinct
Form D630LDC17P

I.   INTRODUCTION

Product Description: Flexible Premium Index-Linked Universal Life Insurance payable at death. Maturity is at age 120. The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited. There are multiple index-linked accounts and a fixed interest option from which the owner may choose to allocate premiums. Premiums will be allocated initially to a short term holding account which will receive interest at the same rate as the fixed interest account. On a sweep date, the premium will be allocated to the fixed interest and index linked accounts in proportions designated by the owner.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Charges other than premium loads are distributed across the different segments and accounts on a pro-rata basis. The pro-rata amount is determined by the segment, short term holding account, and fixed interest account values at the time of the deduction in proportion to the total accumulation value. For purposes of calculating the net amount at risk, the accumulation value is determined by summing segment values, fixed interest accumulation value, and the short term holding account value.

Surrender charges will not change from those shown in Appendix C. Surrender charge rates are applied to the current specified amount.

We credit fixed interest using a portfolio-year method. Credited interest is guaranteed to be not less than 2% for the fixed interest account and 0% for the index-linked accounts. Current credited fixed interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread. Interest on Index Linked accounts are credited at the segment maturity date. The amount credited is the index value at the segment maturity multiplied by the segment index rate. The segment index rate being the following:

$$\frac{Index_{End\ of\ Segment} - Index_{Beginning\ of\ Segment}}{Index_{Beginning\ of\ Segment}} \times Participation\ Rate$$

The segment index rate is subject to the cap set at the beginning of the segment and floor set at issue. The different index strategies are as follows, if there is a change in the future a new actuarial memorandum will be supplied.

Index Strategy	Index	Guar Min Par Rate	Guar Min Segment Cap	Guar Min Floor Rate	Segment Length	Crediting Method
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This product incorporates two traditional cumulative no-lapse provision. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premium accumulated at 2% to determine if the No-Lapse Protection continues. While the No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
Short Term No-Lapse Protection Guarantee Period: Minimum (10, Maximum (5, 85 – Issue Age))
Long Term No-Lapse Protection Guarantee Period: Maximum (5, 85 – Issue Age)

Two types of loans are available. The first is a standard loan. When selected, the standard loan will require sufficient value within the fixed interest account to cover any loan amount. If there is insufficient value, the policy will transfer the necessary funds to the fixed account on a pro rata basis from the index account. The loan will be credited at the guaranteed interest rate of the fixed account and charged interest based on the schedule in the contract.

The second loan type is an indexed loan. Interest will be credited in accordance with the fixed or indexed account return. The index loan will be charged interest at a declared rate set by the company but not to exceed the maximum rate set in the contract.

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $100,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Definition of life insurance will be set based on the Cash Value Accumulation Test. There are two death benefit option types available, level and increasing.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II. MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in

Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. For attained ages less than 16, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 16 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table but do not exceed $\frac{1-(1-q_x)^{\frac{1}{12}}}{(1-q_x)^{\frac{1}{12}}}$. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III. STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV. CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum_{2}^{20} Charges_t}{19}$$

Where $Charges_t = PercentOfPremLoad_t * Prem_t + (UnitLoad_t * Units + perPolicyLoad_t)*12$

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 120)

$$E = 10 + 1.25 \cdot \min\left[\begin{array}{c} P_x^{NNL} \\ \hline 40 \end{array}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$$E \cdot \frac{\ddot{a}_{x+t}}{\ddot{a}_x}$$, where $\ddot{a}_{x+t}$ and $\ddot{a}_x$ are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Male Age 35, Standard Nontobacco
$100,000 specified amount
4.00% credited interest
annual premium = $707

$$\text{IAEC} = \left[707 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[707 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$P_{35}^{NNL} = 13.0562$

$$E = 10 + 1.25 \cdot \min\left[\begin{array}{c} 13.0562 \\ \hline 40 \end{array}\right] = 26.32$$

$_t AV$ = Accumulation value at the end of year t

$_t CSV$ = Cash surrender value at the end of year t

$_t SC$ = Surrender charge for year t
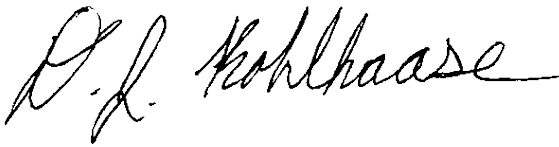
$$_5AV = 2,402$$

$$_5SC = 1,800$$

$$_5CSV = {_5}AV - {_5}SC = 2,402 - 1,800 = 602$$

$$_5SC^{max} = \text{maximum allowable surrender charge in 5th duration}$$
$$\text{based on E, for a \$100,000 policy.}$$

$$_5SC^{max} = 100 \cdot E \cdot \frac{\ddot{a}_{40}}{\ddot{a}_{35}} = 100 \cdot 26.32 \cdot \frac{28.6721}{30.6147} = 2,995 \cdot .9365 = 2,805 > 1,800$$

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly / $1000 Net Amount at Risk

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
0	0.0200		0.0217		61	0.4583	1.1275	0.3375	0.9267
1	0.0125		0.0117		62	0.5092	1.2583	0.3700	1.0267
2	0.0108		0.0075		63	0.5675	1.4017	0.4075	1.1367
3	0.0100		0.0067		64	0.6308	1.5600	0.4475	1.2558
4	0.0092		0.0067		65	0.6992	1.7325	0.4917	1.3850
5	0.0083		0.0075		66	0.7717	1.9150	0.5392	1.5233
6	0.0083		0.0075		67	0.8517	2.1058	0.5900	1.6708
7	0.0075		0.0067		68	0.9408	2.3108	0.6467	1.8250
8	0.0075		0.0067		69	1.0442	2.5358	0.7125	1.9908
9	0.0075		0.0067		70	1.1667	2.7900	0.7892	2.1750
10	0.0083		0.0075		71	1.3117	3.0783	0.8800	2.3658
11	0.0092		0.0075		72	1.4825	3.3967	0.9867	2.5633
12	0.0117		0.0067		73	1.6792	3.7392	1.1108	2.7783
13	0.0167		0.0075		74	1.9017	4.0942	1.2550	3.0150
14	0.0242		0.0125		75	2.1467	4.4508	1.4208	3.2767
15	0.0350		0.0192		76	2.4158	4.8025	1.6108	3.5675
16	0.0492		0.0250		77	2.7133	5.1525	1.8317	3.8892
17	0.0650		0.0275		78	3.0475	5.5100	2.0925	4.2442
18	0.0667	0.0667	0.0275	0.0275	79	3.4308	5.8892	2.4067	4.6767
19	0.0692	0.0700	0.0275	0.0275	80	3.8758	6.3017	2.7775	5.2208
20	0.0708	0.0725	0.0267	0.0267	81	4.3842	6.7400	3.1733	5.8542
21	0.0708	0.0750	0.0267	0.0267	82	4.9658	7.2992	3.5833	6.5683
22	0.0692	0.0775	0.0267	0.0275	83	5.6400	8.0275	4.0542	7.3317
23	0.0683	0.0800	0.0267	0.0300	84	6.4233	8.8533	4.7033	8.0667
24	0.0683	0.0833	0.0267	0.0333	85	7.3308	9.7908	5.4492	8.9533
25	0.0658	0.0842	0.0267	0.0333	86	8.3767	10.8433	6.1892	9.9925
26	0.0567	0.0842	0.0267	0.0342	87	9.5683	12.0075	7.0383	11.0108
27	0.0517	0.0833	0.0283	0.0342	88	10.8875	13.2550	8.0067	12.1075
28	0.0500	0.0817	0.0308	0.0358	89	12.3058	14.5508	9.0742	13.2633
29	0.0467	0.0817	0.0325	0.0383	90	13.7908	15.8642	10.2283	14.4467
30	0.0450	0.0833	0.0342	0.0408	91	15.2967	17.1533	11.4692	15.6492
31	0.0483	0.0875	0.0358	0.0442	92	16.7950	18.4000	12.8117	16.8825
32	0.0517	0.0942	0.0400	0.0475	93	18.2442	19.5758	14.2142	18.0850
33	0.0567	0.1008	0.0467	0.0567	94	19.5758	20.6258	15.6708	19.2425
34	0.0658	0.1083	0.0542	0.0683	95	20.9667	21.7442	17.3458	20.5425

35	0.0767	0.1175	0.0617	0.0792	96	22.5858	23.1242	19.2967	22.0383
36	0.0883	0.1283	0.0700	0.0933	97	24.3242	24.6525	21.4292	23.5942
37	0.1000	0.1408	0.0767	0.1083	98	26.1883	26.3492	23.7317	25.1783
38	0.1092	0.1558	0.0825	0.1225	99	28.1400	28.1867	26.1725	26.7458
39	0.1158	0.1767	0.0850	0.1333	100	30.0742	30.0742	28.5150	28.5150
40	0.1217	0.1983	0.0858	0.1433	101	31.9217	31.9217	30.6050	30.6050
41	0.1292	0.2208	0.0867	0.1517	102	33.7517	33.7517	32.6592	32.6592
42	0.1375	0.2417	0.0867	0.1608	103	35.5308	35.5308	34.6433	34.6433
43	0.1458	0.2600	0.0867	0.1700	104	37.2275	37.2275	36.5242	36.5242
44	0.1508	0.2733	0.0875	0.1792	105	38.8083	38.8083	38.2700	38.2700
45	0.1558	0.2883	0.0892	0.1933	106	40.5258	40.5258	40.0908	40.0908
46	0.1617	0.3067	0.0925	0.2117	107	42.6983	42.6983	42.2725	42.2725
47	0.1675	0.3267	0.0975	0.2325	108	44.9842	44.9842	44.5708	44.5708
48	0.1750	0.3492	0.1033	0.2550	109	47.3892	47.3892	46.9908	46.9908
49	0.1833	0.3742	0.1108	0.2800	110	49.9192	49.9192	49.5392	49.5392
50	0.1942	0.4033	0.1208	0.3075	111	52.5800	52.5800	52.2208	52.2208
51	0.2100	0.4358	0.1333	0.3392	112	55.3775	55.3775	55.0425	55.0425
52	0.2300	0.4733	0.1483	0.3725	113	58.3175	58.3175	58.0100	58.0100
53	0.2508	0.5142	0.1667	0.4108	114	61.4058	61.4058	61.1292	61.1292
54	0.2725	0.5608	0.1867	0.4525	115	64.6483	64.6483	64.4067	64.4067
55	0.2933	0.6142	0.2058	0.4992	116	68.0500	68.0500	67.8483	67.8483
56	0.3125	0.6742	0.2250	0.5525	117	71.6167	71.6167	71.4583	71.4583
57	0.3325	0.7425	0.2433	0.6125	118	75.3508	75.3508	75.2408	75.2408
58	0.3542	0.8200	0.2633	0.6792	119	79.2567	79.2567	79.1992	79.1992
59	0.3808	0.9092	0.2842	0.7525	120	0	0	0	0
60	0.4142	1.0108	0.3083	0.8350					

Appendix B

Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance 2016 IUL Protector – Sex Distinct.xlsm"

Appendix C

Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges IUL Protector – Sex Distinct.xls"

Appendix D

Guaranteed Monthly Unit Loads per 1,000 Specified Amount
Insert "Unit Loads IUL Protector – Sex Distinct.xlsx"

Appendix E

Minimum Guaranteed Cash Value
Male, Standard Nontobacco, $707 Annual Premium, Issue age 35, $100,000 Specified Amount
100% allocated to 100% Participation Indexed Account

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$200	$0	$100,000
2	$386	$0	$100,000
3	$558	$0	$100,000
4	$720	$0	$100,000
5	$874	$0	$100,000
6	$1,022	$0	$100,000
7	$1,160	$0	$100,000
8	$1,289	$89	$100,000
9	$1,409	$309	$100,000
10	$1,523	$623	$100,000
11	$1,631	$931	$100,000
12	$1,732	$1,232	$100,000
13	$1,827	$1,527	$100,000
14	$1,913	$1,813	$100,000
15	$1,990	$1,990	$100,000
16	$2,054	$2,054	$100,000
17	$2,100	$2,100	$100,000
18	$2,122	$2,122	$100,000
19	$2,121	$2,121	$100,000
20	$2,093	$2,093	$100,000

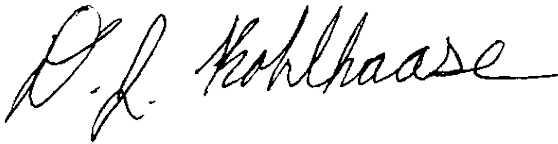**Appendix F**

CERTIFICATION OF COMPLIANCE

In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:
- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the actual excess first year expenses is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
AccumUL Answers – Unisex Distinct
Form D422LNA13P

I.   INTRODUCTION

Product Description: Flexible Premium Universal Life Insurance payable at death. Maturity is at age 120.

The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Surrender charges will not change from those shown in Appendix C. Surrender charges are applied to the greater of the original specified amount or the current specified amount.

We credit interest using an investment-year method. Under that method, interest is credited at rates which vary by the date that Net Premiums were received by us. Any future change in interest rate or rates are made separately for each date that Net Premiums were received. Accordingly, the interest credited to each Net Premium may vary. In crediting interest using the investment-year method, we deem any Partial Withdrawals or Loans made by the owner as coming from the portion of the Accumulation Value which represents Net Premiums received by us from the most recent date to the earliest date

Credited interest is guaranteed at 2%. Current credited interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread.

This product incorporates two traditional cumulative no-lapse provisions. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premiums accumulated at 2% to determine if the No-Lapse Protection continues. While the applicable No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
        Short-Term No-Lapse Protection Guarantee Period: 5 years
        Long-Term No-Lapse Protection Guarantee Period
                Min(30, 85 – Issue Age) if Issue Age ≤ 80; N/A otherwise

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $25,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II. MORTALITY TABLES AND INTEREST RATES

The base mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. For attained ages less than 18, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 18 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III. STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV. CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum_{2}^{20} Charges_t}{19}$$

Where $Charges_t = PercentOfPremLoad_t * Prem_t + (UnitLoad_t * Units + perPolicyLoad_t)*12$

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

      policy (endowment at age 100)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \frac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by risk class, the unamortized unused initial expense allowances must differ by risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by risk class and are less than the unamortized unused initial expense allowances.

<u>EXAMPLE</u>

Assumptions: Age 35, Standard Nontobacco
    $100,000 specified amount
    guaranteed assumptions (e.g. 2.00% credited interest)
    annual premium = $880

$$\text{IAEC} = \left[880 \cdot .1 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[880 \cdot .1 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$P_{35}^{NNL} = 12.82$

$$E = 10 + 1.25 \cdot \min\left[\frac{12.82}{40}\right] = 26.02$$

$_t\text{AV}$ = Accumulation value at the end of year t

$_t\text{CSV}$ = Cash surrender value at the end of year t

$_t\text{SC}$ = Surrender charge for year t

$_5\text{AV} = 1{,}810$

$_5\text{SC} = 1{,}400$

$_5\text{CSV} = {}_5\text{AV} - {}_5\text{SC} = 1{,}810 - 1{,}400 = 410$

$_5\text{SC}^{\text{max}}$ = maximum allowable surrender charge in 5th duration
based on E, for a $100,000 policy.

$$_5SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.02 \cdot \frac{28.9151}{30.8410} = 2{,}602 \cdot .93755 = 2{,}440 > 1{,}400$$

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly Per $1,000 Net Amount at Risk

AGE	Nont	Tob	AGE	Nont	Tob	AGE	Nont	Tob
0	0.0203		51	0.1947	0.4165	102	33.5332	33.5332
1	0.0123		52	0.2137	0.4532	103	35.3533	35.3533
2	0.0102		53	0.2340	0.4935	104	37.0868	37.0868
3	0.0093		54	0.2553	0.5392	105	38.7007	38.7007
4	0.0087		55	0.2758	0.5912	106	40.4388	40.4388
5	0.0082		56	0.2950	0.6498	107	42.6132	42.6132
6	0.0082		57	0.3147	0.7165	108	44.9015	44.9015
7	0.0073		58	0.3360	0.7918	109	47.3095	47.3095
8	0.0073		59	0.3615	0.8778	110	49.8432	49.8432
9	0.0073		60	0.3930	0.9757	111	52.5082	52.5082
10	0.0082		61	0.4342	1.0873	112	55.3105	55.3105
11	0.0088		62	0.4813	1.2120	113	58.2560	58.2560
12	0.0107		63	0.5355	1.3487	114	61.3505	61.3505
13	0.0148		64	0.5942	1.4992	115	64.6000	64.6000
14	0.0218		65	0.6577	1.6630	116	68.0097	68.0097
15	0.0318		66	0.7252	1.8367	117	71.5850	71.5850
16	0.0443		67	0.7993	2.0188	118	75.3288	75.3288
17	0.0575		68	0.8820	2.2137	119	79.2452	79.2452
18	0.0588	0.0588	69	0.9778	2.4268	120	83.3333	83.3333
19	0.0608	0.0615	70	1.0912	2.6670			
20	0.0620	0.0633	71	1.2253	2.9358			
21	0.0620	0.0653	72	1.3833	3.2300			
22	0.0607	0.0675	73	1.5655	3.5470			
23	0.0600	0.0700	74	1.7723	3.8783			
24	0.0600	0.0733	75	2.0015	4.2160			
25	0.0580	0.0740	76	2.2548	4.5555			
26	0.0507	0.0742	77	2.5370	4.8998			
27	0.0470	0.0735	78	2.8565	5.2568			
28	0.0462	0.0725	79	3.2260	5.6467			
29	0.0438	0.0730	80	3.6562	6.0855			
30	0.0428	0.0748	81	4.1420	6.5628			
31	0.0458	0.0788	82	4.6893	7.1530			
32	0.0493	0.0848	83	5.3228	7.8883			
33	0.0547	0.0920	84	6.0793	8.6960			
34	0.0635	0.1003	85	6.9545	9.6233			
35	0.0737	0.1098	86	7.9392	10.6732			
36	0.0847	0.1213	87	9.0623	11.8082			
37	0.0953	0.1343	88	10.3113	13.0255			

38	0.1038	0.1492	89	11.6595	14.2933
39	0.1097	0.1680	90	13.0783	15.5807
40	0.1145	0.1873	91	14.5312	16.8525
41	0.1207	0.2070	92	15.9983	18.0965
42	0.1273	0.2255	93	17.4382	19.2777
43	0.1340	0.2420	94	18.7948	20.3492
44	0.1382	0.2545	95	20.2425	21.5038
45	0.1425	0.2693	96	21.9280	22.9070
46	0.1478	0.2877	97	23.7452	24.4408
47	0.1535	0.3078	98	25.6970	26.1150
48	0.1607	0.3303	99	27.7465	27.8985
49	0.1688	0.3553	100	29.7623	29.7623
50	0.1795	0.3842	101	31.6583	31.6583

Appendix B

Unamortized Unused Initial Expense Allowance

Insert "Expense Allowance Accum Answers 2017 CSO – Unisex.xls," "Expense Allowance Accum Answers 2017 CSO – Unisex.pdf"

Appendix C

Surrender Charge per 1,000 Specified Amount

Insert "Surrender Charges AccumUL Answers 2017 CSO – Unisex.xls," "Surrender Charges AccumUL Answers 2017 CSO – Unisex.pdf"

Appendix D

Guaranteed Monthly Unit Loads per 1,000 Specified Amount

Insert "Unit Loads AccumUL Plus – Unisex.xls"

Appendix E

Minimum Guaranteed Cash Value
Standard Nontobacco, $880 Annual Premium, Issue age 35, $100,000 Specified Amount

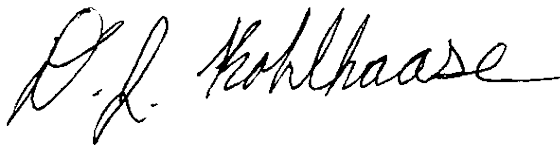| Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$371	$0	$100,000
2	$735	$0	$100,000
3	$1,096	$0	$100,000
4	$1,453	$0	$100,000
5	$1,810	$410	$100,000
6	$2,171	$1,071	$100,000
7	$2,531	$1,731	$100,000
8	$2,891	$2,391	$100,000
9	$3,251	$3,051	$100,000
10	$3,614	$3,614	$100,000
11	$3,980	$3,980	$100,000
12	$4,349	$4,349	$100,000
13	$4,718	$4,718	$100,000
14	$5,087	$5,087	$100,000
15	$5,455	$5,455	$100,000
16	$5,819	$5,819	$100,000
17	$6,174	$6,174	$100,000
18	$6,515	$6,515	$100,000
19	$6,841	$6,841	$100,000
20	$7,151	$7,151	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

      In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

      I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:
- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
AccumUL Answers – Sex Distinct
Form D421LNA13P

I.   INTRODUCTION

Product Description: Flexible Premium Universal Life Insurance payable at death. Maturity is at age 120.

The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on a variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Surrender charges will not change from those shown in Appendix C. Surrender charges are applied to the greater of the original specified amount or the current specified amount.

We credit interest using an investment-year method. Under that method, interest is credited at rates which vary by the date that Net Premiums were received by us. Any future change in interest rate or rates are made separately for each date that Net Premiums were received. Accordingly, the interest credited to each Net Premium may vary. In crediting interest using the investment-year method, we deem any Partial Withdrawals or Loans made by the owner as coming from the portion of the Accumulation Value which represents Net Premiums received by us from the most recent date to the earliest date.

Credited interest is guaranteed at 2%. Current credited interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread.

This product incorporates two traditional cumulative no-lapse provisions. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premiums accumulated at 2% to determine if the No-Lapse Protection continues. While the applicable No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
        Short-Term No-Lapse Protection Guarantee Period: 5 years
        Long-Term No-Lapse Protection Guarantee Period
                Min(30, 85 – Issue Age) if Issue Age ≤ 80; N/A otherwise

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $25,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The base mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. For attained ages less than 18, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 18 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC   = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum_{2}^{20} Charges_t}{19}$$

Where $Charges_t$ = PercentOfPremLoad$_t$ * Prem$_t$ + (UnitLoad$_t$ * Units + perPolicyLoad$_t$)*12

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per \$1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per \$1,000 for this

       policy (endowment at age 100)

$$E = 10 + 1.25 \cdot \min \left[\frac{P_x^{NNL}}{40} \right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on the guaranteed mortality charges displayed in

Appendix A and valuation interest.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Male Age 35, Standard Nontobacco
    \$100,000 specified amount
    guaranteed assumptions (e.g. 2.00% credited interest)
    annual premium = \$880

$$\text{IAEC} = \left[880 \cdot .1 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[880 \cdot .1 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$$P_{35}^{NNL} = 13.06$$

$$E = 10 + 1.25 \cdot min\left[\frac{13.06}{40}\right] = 26.32$$

$_t$AV = Accumulation value at the end of year t

$_t$CSV = Cash surrender value at the end of year t

$_t$SC = Surrender charge for year t
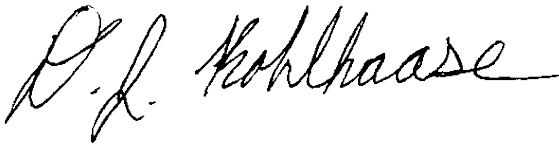
$_5$AV = 1,783

$_5$SC = 1,400

$_5$CSV = $_5$AV − $_5$SC = 1,783 − 1,400 = 383

$_5$SC^{max} = maximum allowable surrender charge in 5th duration
based on E, for a $100,000 policy.

$$_5SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.32 \cdot \frac{28.6721}{30.6147} = 2{,}632 \cdot .93655 = 2{,}465 > 1{,}400$$

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly / $1000 Net Amount at Risk

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
0	0.0200		0.0217		61	0.4583	1.1275	0.3375	0.9267
1	0.0125		0.0117		62	0.5092	1.2583	0.3700	1.0267
2	0.0108		0.0075		63	0.5675	1.4017	0.4075	1.1367
3	0.0100		0.0067		64	0.6308	1.5600	0.4475	1.2558
4	0.0092		0.0067		65	0.6992	1.7325	0.4917	1.3850
5	0.0083		0.0075		66	0.7717	1.9150	0.5392	1.5233
6	0.0083		0.0075		67	0.8517	2.1058	0.5900	1.6708
7	0.0075		0.0067		68	0.9408	2.3108	0.6467	1.8250
8	0.0075		0.0067		69	1.0442	2.5358	0.7125	1.9908
9	0.0075		0.0067		70	1.1667	2.7900	0.7892	2.1750
10	0.0083		0.0075		71	1.3117	3.0783	0.8800	2.3658
11	0.0092		0.0075		72	1.4825	3.3967	0.9867	2.5633
12	0.0117		0.0067		73	1.6792	3.7392	1.1108	2.7783
13	0.0167		0.0075		74	1.9017	4.0942	1.2550	3.0150
14	0.0242		0.0125		75	2.1467	4.4508	1.4208	3.2767
15	0.0350		0.0192		76	2.4158	4.8025	1.6108	3.5675
16	0.0492		0.0250		77	2.7133	5.1525	1.8317	3.8892
17	0.0650		0.0275		78	3.0475	5.5100	2.0925	4.2442
18	0.0667	0.0667	0.0275	0.0275	79	3.4308	5.8892	2.4067	4.6767
19	0.0692	0.0700	0.0275	0.0275	80	3.8758	6.3017	2.7775	5.2208
20	0.0708	0.0725	0.0267	0.0267	81	4.3842	6.7400	3.1733	5.8542
21	0.0708	0.0750	0.0267	0.0267	82	4.9658	7.2992	3.5833	6.5683
22	0.0692	0.0775	0.0267	0.0275	83	5.6400	8.0275	4.0542	7.3317
23	0.0683	0.0800	0.0267	0.0300	84	6.4233	8.8533	4.7033	8.0667
24	0.0683	0.0833	0.0267	0.0333	85	7.3308	9.7908	5.4492	8.9533
25	0.0658	0.0842	0.0267	0.0333	86	8.3767	10.8433	6.1892	9.9925
26	0.0567	0.0842	0.0267	0.0342	87	9.5683	12.0075	7.0383	11.0108
27	0.0517	0.0833	0.0283	0.0342	88	10.8875	13.2550	8.0067	12.1075
28	0.0500	0.0817	0.0308	0.0358	89	12.3058	14.5508	9.0742	13.2633
29	0.0467	0.0817	0.0325	0.0383	90	13.7908	15.8642	10.2283	14.4467
30	0.0450	0.0833	0.0342	0.0408	91	15.2967	17.1533	11.4692	15.6492
31	0.0483	0.0875	0.0358	0.0442	92	16.7950	18.4000	12.8117	16.8825
32	0.0517	0.0942	0.0400	0.0475	93	18.2442	19.5758	14.2142	18.0850
33	0.0567	0.1008	0.0467	0.0567	94	19.5758	20.6258	15.6708	19.2425
34	0.0658	0.1083	0.0542	0.0683	95	20.9667	21.7442	17.3458	20.5425

35	0.0767	0.1175	0.0617	0.0792	96	22.5858	23.1242	19.2967	22.0383
36	0.0883	0.1283	0.0700	0.0933	97	24.3242	24.6525	21.4292	23.5942
37	0.1000	0.1408	0.0767	0.1083	98	26.1883	26.3492	23.7317	25.1783
38	0.1092	0.1558	0.0825	0.1225	99	28.1400	28.1867	26.1725	26.7458
39	0.1158	0.1767	0.0850	0.1333	100	30.0742	30.0742	28.5150	28.5150
40	0.1217	0.1983	0.0858	0.1433	101	31.9217	31.9217	30.6050	30.6050
41	0.1292	0.2208	0.0867	0.1517	102	33.7517	33.7517	32.6592	32.6592
42	0.1375	0.2417	0.0867	0.1608	103	35.5308	35.5308	34.6433	34.6433
43	0.1458	0.2600	0.0867	0.1700	104	37.2275	37.2275	36.5242	36.5242
44	0.1508	0.2733	0.0875	0.1792	105	38.8083	38.8083	38.2700	38.2700
45	0.1558	0.2883	0.0892	0.1933	106	40.5258	40.5258	40.0908	40.0908
46	0.1617	0.3067	0.0925	0.2117	107	42.6983	42.6983	42.2725	42.2725
47	0.1675	0.3267	0.0975	0.2325	108	44.9842	44.9842	44.5708	44.5708
48	0.1750	0.3492	0.1033	0.2550	109	47.3892	47.3892	46.9908	46.9908
49	0.1833	0.3742	0.1108	0.2800	110	49.9192	49.9192	49.5392	49.5392
50	0.1942	0.4033	0.1208	0.3075	111	52.5800	52.5800	52.2208	52.2208
51	0.2100	0.4358	0.1333	0.3392	112	55.3775	55.3775	55.0425	55.0425
52	0.2300	0.4733	0.1483	0.3725	113	58.3175	58.3175	58.0100	58.0100
53	0.2508	0.5142	0.1667	0.4108	114	61.4058	61.4058	61.1292	61.1292
54	0.2725	0.5608	0.1867	0.4525	115	64.6483	64.6483	64.4067	64.4067
55	0.2933	0.6142	0.2058	0.4992	116	68.0500	68.0500	67.8483	67.8483
56	0.3125	0.6742	0.2250	0.5525	117	71.6167	71.6167	71.4583	71.4583
57	0.3325	0.7425	0.2433	0.6125	118	75.3508	75.3508	75.2408	75.2408
58	0.3542	0.8200	0.2633	0.6792	119	79.2567	79.2567	79.1992	79.1992
59	0.3808	0.9092	0.2842	0.7525	120	83.3333	83.3333	83.3333	83.3333
60	0.4142	1.0108	0.3083	0.8350					

Appendix B

Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance Accum Answers 2017 CSO – Sex Distinct.xls," "Expense Allowance Accum Answers 2017 CSO – Sex Distinct.pdf"

Appendix C

Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges AccumUL Answers 2017 CSO – Sex Distinct.xls," "Surrender Charges AccumUL Answers 2017 CSO – Sex Distinct.pdf"

Appendix D
Guaranteed Monthly Unit Loads per 1,000 Specified Amount
Insert "Unit Loads AccumUL Plus – Sex Distinct.xls"

Appendix E

Minimum Guaranteed Cash Value
Male, Standard Nontobacco, $880 Annual Premium, Issue age 35, $100,000 Specified Amount

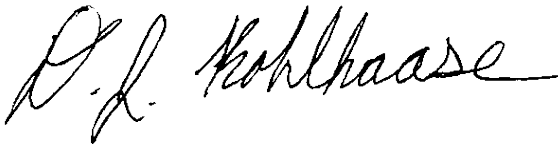| Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$367	$0	$100,000
2	$727	$0	$100,000
3	$1,081	$0	$100,000
4	$1,432	$0	$100,000
5	$1,783	$383	$100,000
6	$2,133	$1,033	$100,000
7	$2,483	$1,683	$100,000
8	$2,830	$2,330	$100,000
9	$3,175	$2,975	$100,000
10	$3,522	$3,522	$100,000
11	$3,871	$3,871	$100,000
12	$4,220	$4,220	$100,000
13	$4,571	$4,571	$100,000
14	$4,920	$4,920	$100,000
15	$5,268	$5,268	$100,000
16	$5,611	$5,611	$100,000
17	$5,944	$5,944	$100,000
18	$6,262	$6,262	$100,000
19	$6,563	$6,563	$100,000
20	$6,847	$6,847	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

      In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

      I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
TERM LIFE INSURANCE RIDER ON ADDITIONAL INSURED -
Insured Rider Form D632LDC17R

I.   Introduction

Rider Description: This rider is a cost rider that can only be added at issue. It provides term coverage on the base insured renewable yearly to age 100 and convertible to age 75.

Issue Ages: 0-90
Minimum Specified Amount: $25,000

Reserves and Cash Values: The reserves for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983. Premiums are not paid separately for this rider. Charges for this rider are integrated into the base contract and are taken into account when determining nonforfeiture benefits on the base contract under model regulation 585. No additional cash values are required for this rider.

Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance rates. Current charges are not guaranteed for any period of time. The rating class will not be changed as a result of changes to current charges.

This rider provides annually renewable term coverage with no additional per $1,000 charges applied to the base policy. It is exempt from providing non-forfeiture benefits.

II.   Mortality Table and Interest Rate

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Age Last Birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b.

III.   Statutory Reserves

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   Guaranteed Cost of Insurance Charges

Guaranteed Maximum Cost of Insurance charges are based on the 2017 Commissioners Standard Ordinary Mortality Age Last Birthday, Male and Female, Smoker and Nonsmoker. Equivalent monthly charges were derived by taking the annual rates in the above table multiplied by 1/12. They are listed in the Appendix.

_____

David L Kohlhaase, Jr. FSA, CERA, MAAA

Managing Actuary

October 1, 2019

Appendix

Guaranteed Cost of Insurance Charges
Monthly / $1000 Benefit

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
0	0.0200		0.0217		51	0.2100	0.4358	0.1333	0.3392
1	0.0125		0.0117		52	0.2300	0.4733	0.1483	0.3725
2	0.0108		0.0075		53	0.2508	0.5142	0.1667	0.4108
3	0.0100		0.0067		54	0.2725	0.5608	0.1867	0.4525
4	0.0092		0.0067		55	0.2933	0.6142	0.2058	0.4992
5	0.0083		0.0075		56	0.3125	0.6742	0.2250	0.5525
6	0.0083		0.0075		57	0.3325	0.7425	0.2433	0.6125
7	0.0075		0.0067		58	0.3542	0.8200	0.2633	0.6792
8	0.0075		0.0067		59	0.3808	0.9092	0.2842	0.7525
9	0.0075		0.0067		60	0.4142	1.0108	0.3083	0.8350
10	0.0083		0.0075		61	0.4583	1.1275	0.3375	0.9267
11	0.0092		0.0075		62	0.5092	1.2583	0.3700	1.0267
12	0.0117		0.0067		63	0.5675	1.4017	0.4075	1.1367
13	0.0167		0.0075		64	0.6308	1.5600	0.4475	1.2558
14	0.0242		0.0125		65	0.6992	1.7325	0.4917	1.3850
15	0.0350		0.0192		66	0.7717	1.9150	0.5392	1.5233
16	0.0492		0.0250		67	0.8517	2.1058	0.5900	1.6708
17	0.0650		0.0275		68	0.9408	2.3108	0.6467	1.8250
18	0.0667	0.0667	0.0275	0.0275	69	1.0442	2.5358	0.7125	1.9908
19	0.0692	0.0700	0.0275	0.0275	70	1.1667	2.7900	0.7892	2.1750
20	0.0708	0.0725	0.0267	0.0267	71	1.3117	3.0783	0.8800	2.3658
21	0.0708	0.0750	0.0267	0.0267	72	1.4825	3.3967	0.9867	2.5633
22	0.0692	0.0775	0.0267	0.0275	73	1.6792	3.7392	1.1108	2.7783
23	0.0683	0.0800	0.0267	0.0300	74	1.9017	4.0942	1.2550	3.0150
24	0.0683	0.0833	0.0267	0.0333	75	2.1467	4.4508	1.4208	3.2767
25	0.0658	0.0842	0.0267	0.0333	76	2.4158	4.8025	1.6108	3.5675
26	0.0567	0.0842	0.0267	0.0342	77	2.7133	5.1525	1.8317	3.8892
27	0.0517	0.0833	0.0283	0.0342	78	3.0475	5.5100	2.0925	4.2442
28	0.0500	0.0817	0.0308	0.0358	79	3.4308	5.8892	2.4067	4.6767
29	0.0467	0.0817	0.0325	0.0383	80	3.8758	6.3017	2.7775	5.2208
30	0.0450	0.0833	0.0342	0.0408	81	4.3842	6.7400	3.1733	5.8542
31	0.0483	0.0875	0.0358	0.0442	82	4.9658	7.2992	3.5833	6.5683
32	0.0517	0.0942	0.0400	0.0475	83	5.6400	8.0275	4.0542	7.3317
33	0.0567	0.1008	0.0467	0.0567	84	6.4233	8.8533	4.7033	8.0667
34	0.0658	0.1083	0.0542	0.0683	85	7.3308	9.7908	5.4492	8.9533
35	0.0767	0.1175	0.0617	0.0792	86	8.3767	10.8433	6.1892	9.9925
36	0.0883	0.1283	0.0700	0.0933	87	9.5683	12.0075	7.0383	11.0108
37	0.1000	0.1408	0.0767	0.1083	88	10.8875	13.2550	8.0067	12.1075
38	0.1092	0.1558	0.0825	0.1225	89	12.3058	14.5508	9.0742	13.2633
39	0.1158	0.1767	0.0850	0.1333	90	13.7908	15.8642	10.2283	14.4467
40	0.1217	0.1983	0.0858	0.1433	91	15.2967	17.1533	11.4692	15.6492
41	0.1292	0.2208	0.0867	0.1517	92	16.7950	18.4000	12.8117	16.8825
42	0.1375	0.2417	0.0867	0.1608	93	18.2442	19.5758	14.2142	18.0850
43	0.1458	0.2600	0.0867	0.1700	94	19.5758	20.6258	15.6708	19.2425
44	0.1508	0.2733	0.0875	0.1792	95	20.9667	21.7442	17.3458	20.5425
45	0.1558	0.2883	0.0892	0.1933	96	22.5858	23.1242	19.2967	22.0383
46	0.1617	0.3067	0.0925	0.2117	97	24.3242	24.6525	21.4292	23.5942
47	0.1675	0.3267	0.0975	0.2325	98	26.1883	26.3492	23.7317	25.1783
48	0.1750	0.3492	0.1033	0.2550	99	28.1400	28.1867	26.1725	26.7458
49	0.1833	0.3742	0.1108	0.2800	100	0.0000	0.0000	0.0000	0.0000
50	0.1942	0.4033	0.1208	0.3075					

3

4

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
POLICY FORM: D187LNA10P

I.   INTRODUCTION

Product Description: Flexible Premium Universal Life Insurance payable at death. Maturity at age 120. After age 94 and prior to maturity the death benefit will be based on the greater of the specified amount and 101% of the accumulation value. This product incorporates a no-lapse guarantee provided the no-lapse protection value less loans is greater than or equal to 0. The policy will lapse if the surrender value is not positive, unless the no-lapse protection is in effect and the loan does not exceed the accumulation value less surrender charges. Cost of Insurance charges are banded at $50,000, $100,000, $250,000, $500,000 and $1,000,000.

Issue Ages: 18-85 (preferred plus, preferred, standard plus issue ages are 18-80)

Reserves and Surrender Values: The reserves and surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The base mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance,

respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

The expense charges for this policy are the $5 per month fee, a per 1,000 of specified amount load and a gross premium charge of 10% of each premium payment. These charges do not vary by band. There is no additional expense allowance taken. Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the $5 per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The unused initial expense allowance is equal to the full initial expense allowance. This is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

     policy (endowment at age 120)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40} \right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Male, Nontobacco

$100,000 specified amount
guaranteed assumptions (e.g. 2.00% credited interest)
annual premium = $888.58

$$P^{NNL}_{35} = 13.06$$

$$E = 10 + 1.25 \cdot min\begin{bmatrix} 13.06 \\ 40 \end{bmatrix} = 26.32$$

$_tAV$ = Accumulation value at the end of year t

$_tSV$ = Surrender value at the end of year t

$_tSC$ = Surrender charge for year t

$_6AV = 3,377$

$_6SC = 2,400$

$_6SV = {_6AV} - {_6SC} = 3,377 - 2,400 = 977$

$_6SC^{max}$ = maximum allowable surrender charge in 6th duration
based on E, for a $100,000 policy.

$$_6SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.32 \cdot \frac{28.2669}{30.6147} = 2,632 \cdot .92331 = 2,430 > 2,400$$

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Maximum Cost of Insurance Charges
Monthly / $1000 Net Amount at Risk

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
18	0.0667	0.0667	0.0275	0.0275	70	1.1667	2.7900	0.7892	2.1750
19	0.0692	0.0700	0.0275	0.0275	71	1.3117	3.0783	0.8800	2.3658
20	0.0708	0.0725	0.0267	0.0267	72	1.4825	3.3967	0.9867	2.5633
21	0.0708	0.0750	0.0267	0.0267	73	1.6792	3.7392	1.1108	2.7783
22	0.0692	0.0775	0.0267	0.0275	74	1.9017	4.0942	1.2550	3.0150
23	0.0683	0.0800	0.0267	0.0300	75	2.1467	4.4508	1.4208	3.2767
24	0.0683	0.0833	0.0267	0.0333	76	2.4158	4.8025	1.6108	3.5675
25	0.0658	0.0842	0.0267	0.0333	77	2.7133	5.1525	1.8317	3.8892
26	0.0567	0.0842	0.0267	0.0342	78	3.0475	5.5100	2.0925	4.2442
27	0.0517	0.0833	0.0283	0.0342	79	3.4308	5.8892	2.4067	4.6767
28	0.0500	0.0817	0.0308	0.0358	80	3.8758	6.3017	2.7775	5.2208
29	0.0467	0.0817	0.0325	0.0383	81	4.3842	6.7400	3.1733	5.8542
30	0.0450	0.0833	0.0342	0.0408	82	4.9658	7.2992	3.5833	6.5683
31	0.0483	0.0875	0.0358	0.0442	83	5.6400	8.0275	4.0542	7.3317
32	0.0517	0.0942	0.0400	0.0475	84	6.4233	8.8533	4.7033	8.0667
33	0.0567	0.1008	0.0467	0.0567	85	7.3308	9.7908	5.4492	8.9533
34	0.0658	0.1083	0.0542	0.0683	86	8.3767	10.8433	6.1892	9.9925
35	0.0767	0.1175	0.0617	0.0792	87	9.5683	12.0075	7.0383	11.0108
36	0.0883	0.1283	0.0700	0.0933	88	10.8875	13.2550	8.0067	12.1075
37	0.1000	0.1408	0.0767	0.1083	89	12.3058	14.5508	9.0742	13.2633
38	0.1092	0.1558	0.0825	0.1225	90	13.7908	15.8642	10.2283	14.4467
39	0.1158	0.1767	0.0850	0.1333	91	15.2967	17.1533	11.4692	15.6492
40	0.1217	0.1983	0.0858	0.1433	92	16.7950	18.4000	12.8117	16.8825
41	0.1292	0.2208	0.0867	0.1517	93	18.2442	19.5758	14.2142	18.0850
42	0.1375	0.2417	0.0867	0.1608	94	19.5758	20.6258	15.6708	19.2425
43	0.1458	0.2600	0.0867	0.1700	95	20.9667	21.7442	17.3458	20.5425
44	0.1508	0.2733	0.0875	0.1792	96	22.5858	23.1242	19.2967	22.0383
45	0.1558	0.2883	0.0892	0.1933	97	24.3242	24.6525	21.4292	23.5942
46	0.1617	0.3067	0.0925	0.2117	98	26.1883	26.3492	23.7317	25.1783
47	0.1675	0.3267	0.0975	0.2325	99	28.1400	28.1867	26.1725	26.7458
48	0.1750	0.3492	0.1033	0.2550	100	30.0742	30.0742	28.5150	28.5150
49	0.1833	0.3742	0.1108	0.2800	101	31.9217	31.9217	30.6050	30.6050
50	0.1942	0.4033	0.1208	0.3075	102	33.7517	33.7517	32.6592	32.6592
51	0.2100	0.4358	0.1333	0.3392	103	35.5308	35.5308	34.6433	34.6433
52	0.2300	0.4733	0.1483	0.3725	104	37.2275	37.2275	36.5242	36.5242

53	0.2508	0.5142	0.1667	0.4108	105	38.8083	38.8083	38.2700	38.2700
54	0.2725	0.5608	0.1867	0.4525	106	40.5258	40.5258	40.0908	40.0908
55	0.2933	0.6142	0.2058	0.4992	107	42.6983	42.6983	42.2725	42.2725
56	0.3125	0.6742	0.2250	0.5525	108	44.9842	44.9842	44.5708	44.5708
57	0.3325	0.7425	0.2433	0.6125	109	47.3892	47.3892	46.9908	46.9908
58	0.3542	0.8200	0.2633	0.6792	110	49.9192	49.9192	49.5392	49.5392
59	0.3808	0.9092	0.2842	0.7525	111	52.5800	52.5800	52.2208	52.2208
60	0.4142	1.0108	0.3083	0.8350	112	55.3775	55.3775	55.0425	55.0425
61	0.4583	1.1275	0.3375	0.9267	113	58.3175	58.3175	58.0100	58.0100
62	0.5092	1.2583	0.3700	1.0267	114	61.4058	61.4058	61.1292	61.1292
63	0.5675	1.4017	0.4075	1.1367	115	64.6483	64.6483	64.4067	64.4067
64	0.6308	1.5600	0.4475	1.2558	116	68.0500	68.0500	67.8483	67.8483
65	0.6992	1.7325	0.4917	1.3850	117	71.6167	71.6167	71.4583	71.4583
66	0.7717	1.9150	0.5392	1.5233	118	75.3508	75.3508	75.2408	75.2408
67	0.8517	2.1058	0.5900	1.6708	119	79.2567	79.2567	79.1992	79.1992
68	0.9408	2.3108	0.6467	1.8250	120	83.3333	83.3333	83.3333	83.3333
69	1.0442	2.5358	0.7125	1.9908					

Appendix B
Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance GUL 2017 CSO - Sex Distinct.xls," "Expense Allowance GUL 2017 CSO - Sex Distinct.pdf"

Appendix C
Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges GUL 2017 CSO - Sex Distinct.xls," "Surrender Charges GUL 2017 CSO - Sex Distinct.pdf"

Appendix D

Minimum Guaranteed Cash Value

Male, Standard Nontobacco, $888.58 Annual Premium, Issue age 35, $100,000 Specified Amount

Duration	Cash Accumulation Value	Surrender Value	Death Benefit
1	$563	$0	$100,000
2	$1,124	$0	$100,000
3	$1,683	$0	$100,000
4	$2,244	$0	$100,000
5	$2,808	$408	$100,000
6	$3,377	$977	$100,000
7	$3,950	$1,750	$100,000
8	$4,526	$2,426	$100,000
9	$5,105	$3,205	$100,000
10	$5,690	$3,990	$100,000
11	$6,283	$4,783	$100,000
12	$6,882	$5,482	$100,000
13	$7,488	$6,288	$100,000
14	$8,098	$7,098	$100,000
15	$8,713	$7,913	$100,000
16	$9,330	$8,630	$100,000
17	$9,944	$9,444	$100,000
18	$10,549	$10,249	$100,000
19	$11,146	$11,046	$100,000
20	$11,734	$11,734	$100,000

Appendix E

Table of per $1,000 expense Charges
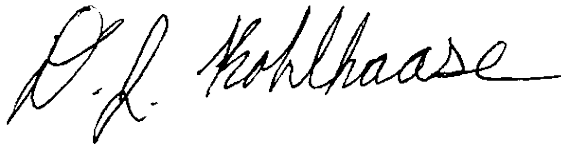
Insert Per 1000 Expense Charges – GUL.xls

Appendix F
CERTIFICATION OF COMPLIANCE

In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6 of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

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David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
POLICY FORM: D188LNA10P

I.   INTRODUCTION

Product Description: Flexible Premium Universal Life Insurance payable at death. Maturity at age 120. After age 94 and prior to maturity the death benefit will be based on the greater of the specified amount and 101% of the accumulation value. This product incorporates a no-lapse guarantee provided the no-lapse protection value less loans is greater than or equal to 0. The policy will lapse if the surrender value is not positive, unless the no-lapse protection is in effect and the loan does not exceed the accumulation value less surrender charges. Cost of Insurance charges are banded at $50,000, $100,000, $250,000, $500,000 and $1,000,000.

Issue Ages: 18-85 (preferred plus, preferred, standard plus issue ages are 18-80)

Reserves and Surrender Values: The reserves and surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The base mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance,

respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

The expense charges for this policy are the $5 per month fee, a per 1,000 of specified amount load and a gross premium charge of 10% of each premium payment. These charges do not vary by band. There is no additional expense allowance taken. Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the $5 per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The unused initial expense allowance is equal to the full initial expense allowance. This is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

      policy (endowment at age 120)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Nontobacco

$100,000 specified amount
guaranteed assumptions (e.g. 2.00% credited interest)
annual premium = $819.53

$$P^{NNL}_{35} = 12.82$$

$$E = 10 + 1.25 \cdot min\left[\frac{12.82}{40}\right] = 26.02$$

$_tAV$ = Accumulation value at the end of year t

$_tSV$ = Surrender value at the end of year t

$_tSC$ = Surrender charge for year t

$_6AV = 3,039$

$_6SC = 2,400$

$_6CSV = {}_6AV - {}_6SC = 3,039 - 2,400 = 639$

$_6SC^{max}$ = maximum allowable surrender charge in 6th duration
based on E, for a $100,000 policy.

$$_6SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.02 \cdot \frac{28.5126}{30.8410} = 2,602 \cdot .9245 = 2,406 > 2,400$$

D.L. Kohlhaase

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David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly Per $1,000 Net Amount at Risk

Age	Nont	Tob		Age	Nont	Tob
18	0.0588	0.0588		70	1.0912	2.6670
19	0.0608	0.0615		71	1.2253	2.9358
20	0.0620	0.0633		72	1.3833	3.2300
21	0.0620	0.0653		73	1.5655	3.5470
22	0.0607	0.0675		74	1.7723	3.8783
23	0.0600	0.0700		75	2.0015	4.2160
24	0.0600	0.0733		76	2.2548	4.5555
25	0.0580	0.0740		77	2.5370	4.8998
26	0.0507	0.0742		78	2.8565	5.2568
27	0.0470	0.0735		79	3.2260	5.6467
28	0.0462	0.0725		80	3.6562	6.0855
29	0.0438	0.0730		81	4.1420	6.5628
30	0.0428	0.0748		82	4.6893	7.1530
31	0.0458	0.0788		83	5.3228	7.8883
32	0.0493	0.0848		84	6.0793	8.6960
33	0.0547	0.0920		85	6.9545	9.6233
34	0.0635	0.1003		86	7.9392	10.6732
35	0.0737	0.1098		87	9.0623	11.8082
36	0.0847	0.1213		88	10.3113	13.0255
37	0.0953	0.1343		89	11.6595	14.2933
38	0.1038	0.1492		90	13.0783	15.5807
39	0.1097	0.1680		91	14.5312	16.8525
40	0.1145	0.1873		92	15.9983	18.0965
41	0.1207	0.2070		93	17.4382	19.2777
42	0.1273	0.2255		94	18.7948	20.3492
43	0.1340	0.2420		95	20.2425	21.5038
44	0.1382	0.2545		96	21.9280	22.9070
45	0.1425	0.2693		97	23.7452	24.4408
46	0.1478	0.2877		98	25.6970	26.1150
47	0.1535	0.3078		99	27.7465	27.8985
48	0.1607	0.3303		100	29.7623	29.7623
49	0.1688	0.3553		101	31.6583	31.6583
50	0.1795	0.3842		102	33.5332	33.5332
51	0.1947	0.4165		103	35.3533	35.3533
52	0.2137	0.4532		104	37.0868	37.0868
53	0.2340	0.4935		105	38.7007	38.7007
54	0.2553	0.5392		106	40.4388	40.4388
55	0.2758	0.5912		107	42.6132	42.6132

56	0.2950	0.6498		108	44.9015	44.9015
57	0.3147	0.7165		109	47.3095	47.3095
58	0.3360	0.7918		110	49.8432	49.8432
59	0.3615	0.8778		111	52.5082	52.5082
60	0.3930	0.9757		112	55.3105	55.3105
61	0.4342	1.0873		113	58.2560	58.2560
62	0.4813	1.2120		114	61.3505	61.3505
63	0.5355	1.3487		115	64.6000	64.6000
64	0.5942	1.4992		116	68.0097	68.0097
65	0.6577	1.6630		117	71.5850	71.5850
66	0.7252	1.8367		118	75.3288	75.3288
67	0.7993	2.0188		119	79.2452	79.2452
68	0.8820	2.2137		120	83.3333	83.3333
69	0.9778	2.4268				

Appendix B
Unamortized Unused Initial Expense Allowance

Insert "Expense Allowance GUL 2017 CSO – Unisex.xls," "Expense Allowance GUL 2017 CSO – Unisex.pdf"

Appendix C
Surrender Charge per 1,000 Specified Amount

Insert "Surrender Charges GUL 2017 CSO - Unisex.xls," "Surrender Charges GUL 2017 CSO – Unisex.pdf"

Appendix D

Minimum Guaranteed Cash Value
Standard Nontobacco, $819.53 Annual Premium, Issue age 35, $100,000 Specified Amount

Duration	Cash Accumulation Value	Surrender Value	Death Benefit
1	$508	$0	$100,000
2	$1,013	$0	$100,000
3	$1,515	$0	$100,000
4	$2,019	$0	$100,000
5	$2,526	$126	$100,000
6	$3,039	$639	$100,000
7	$3,555	$1,355	$100,000
8	$4,075	$2,075	$100,000
9	$4,598	$2,698	$100,000
10	$5,127	$3,427	$100,000
11	$5,664	$4,164	$100,000
12	$6,205	$4,905	$100,000
13	$6,753	$5,553	$100,000
14	$7,304	$6,304	$100,000
15	$7,858	$7,058	$100,000
16	$8,412	$7,812	$100,000
17	$8,963	$8,463	$100,000
18	$9,504	$9,204	$100,000
19	$10,036	$9,936	$100,000
20	$10,557	$10,557	$100,000

Appendix E

Table of per $1,000 expense Charges

Insert Per 1000 Expense Charges – GUL – Unisex.xls

Appendix F
CERTIFICATION OF COMPLIANCE

In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6 of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
POLICY FORM: A998LNA06P

I.   INTRODUCTION

Product Description: Simplified Issue Flexible Premium Universal Life Insurance payable at death. Maturity at age 120. After age 94 and prior to maturity the death benefit will be based on the greater of the specified amount and 101% of the accumulation value. The minimum specified amount at issue is $25,000. This product incorporates a no-lapse guarantee provided the cumulative monthly premium requirement is met. The policy will lapse if the cash surrender value is not positive, unless the no-lapse guarantee is in effect. No-lapse guarantee periods can go to age 120 for all issue ages. This product is not banded and there is only a standard class.

Issue Ages: 18-70

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the [2017] Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. Monthly guaranteed mortality charges were found by multiplying the annual rates by a factor of (1/12), while capping the annual rate at 1. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are not allowed.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the [2017] Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 3.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 3.0%.

III. STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance,

respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

The expense charges for this policy are the $5 per month fee, a per 1,000 of specified amount load and a guaranteed premium charge of 25% of each premium payment. There is no additional expense allowance taken. Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the $5 per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The unused initial expense allowance is equal to the full initial expense allowance. This is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 120)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40} \right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on guaranteed mortality (2017 CSO) and a guaranteed interest rate of 3.0%.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Male, Nontobacco
        $25,000 specified amount

guaranteed assumptions (e.g. 3.00% credited interest)
annual premium = $300

$$P^{NNL}_{35} = 10.28$$

$$E = 10 + 1.25 \cdot min\left[\begin{matrix}10.28 \\ 40\end{matrix}\right] = 22.85$$

$_tAV$ = Accumulation value at the end of year t

$_tCSV$ = Cash surrender value at the end of year t

$_tSC$ = Surrender charge for year t

$_5AV = 596$

$_5SC = 525$

$_5CSV = {_5AV} - {_5SC} = 596 - 525 = 71$

$_5SC^{max}$ = maximum allowable surrender charge in 5th duration

based on E, for a $100,000 policy.

$$_5SC^{max} = 25 \cdot E \cdot \frac{a_{x+t}}{a_x} = 25 \cdot 22.85 \cdot \frac{24.1004}{25.3747} = 571 \cdot .94978 = 543 > 525$$

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary
October 1, 2019

Appendix A
Guaranteed Maximum Cost of Insurance Charges
Monthly / $1000 Net Amount at Risk

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
18	0.0667	0.0667	0.0275	0.0275	70	1.1667	2.7900	0.7892	2.1750
19	0.0692	0.0700	0.0275	0.0275	71	1.3117	3.0783	0.8800	2.3658
20	0.0708	0.0725	0.0267	0.0267	72	1.4825	3.3967	0.9867	2.5633
21	0.0708	0.0750	0.0267	0.0267	73	1.6792	3.7392	1.1108	2.7783
22	0.0692	0.0775	0.0267	0.0275	74	1.9017	4.0942	1.2550	3.0150
23	0.0683	0.0800	0.0267	0.0300	75	2.1467	4.4508	1.4208	3.2767
24	0.0683	0.0833	0.0267	0.0333	76	2.4158	4.8025	1.6108	3.5675
25	0.0658	0.0842	0.0267	0.0333	77	2.7133	5.1525	1.8317	3.8892
26	0.0567	0.0842	0.0267	0.0342	78	3.0475	5.5100	2.0925	4.2442
27	0.0517	0.0833	0.0283	0.0342	79	3.4308	5.8892	2.4067	4.6767
28	0.0500	0.0817	0.0308	0.0358	80	3.8758	6.3017	2.7775	5.2208
29	0.0467	0.0817	0.0325	0.0383	81	4.3842	6.7400	3.1733	5.8542
30	0.0450	0.0833	0.0342	0.0408	82	4.9658	7.2992	3.5833	6.5683
31	0.0483	0.0875	0.0358	0.0442	83	5.6400	8.0275	4.0542	7.3317
32	0.0517	0.0942	0.0400	0.0475	84	6.4233	8.8533	4.7033	8.0667
33	0.0567	0.1008	0.0467	0.0567	85	7.3308	9.7908	5.4492	8.9533
34	0.0658	0.1083	0.0542	0.0683	86	8.3767	10.8433	6.1892	9.9925
35	0.0767	0.1175	0.0617	0.0792	87	9.5683	12.0075	7.0383	11.0108
36	0.0883	0.1283	0.0700	0.0933	88	10.8875	13.2550	8.0067	12.1075
37	0.1000	0.1408	0.0767	0.1083	89	12.3058	14.5508	9.0742	13.2633
38	0.1092	0.1558	0.0825	0.1225	90	13.7908	15.8642	10.2283	14.4467
39	0.1158	0.1767	0.0850	0.1333	91	15.2967	17.1533	11.4692	15.6492
40	0.1217	0.1983	0.0858	0.1433	92	16.7950	18.4000	12.8117	16.8825
41	0.1292	0.2208	0.0867	0.1517	93	18.2442	19.5758	14.2142	18.0850
42	0.1375	0.2417	0.0867	0.1608	94	19.5758	20.6258	15.6708	19.2425
43	0.1458	0.2600	0.0867	0.1700	95	20.9667	21.7442	17.3458	20.5425
44	0.1508	0.2733	0.0875	0.1792	96	22.5858	23.1242	19.2967	22.0383
45	0.1558	0.2883	0.0892	0.1933	97	24.3242	24.6525	21.4292	23.5942
46	0.1617	0.3067	0.0925	0.2117	98	26.1883	26.3492	23.7317	25.1783
47	0.1675	0.3267	0.0975	0.2325	99	28.1400	28.1867	26.1725	26.7458
48	0.1750	0.3492	0.1033	0.2550	100	30.0742	30.0742	28.5150	28.5150
49	0.1833	0.3742	0.1108	0.2800	101	31.9217	31.9217	30.6050	30.6050
50	0.1942	0.4033	0.1208	0.3075	102	33.7517	33.7517	32.6592	32.6592
51	0.2100	0.4358	0.1333	0.3392	103	35.5308	35.5308	34.6433	34.6433
52	0.2300	0.4733	0.1483	0.3725	104	37.2275	37.2275	36.5242	36.5242

53	0.2508	0.5142	0.1667	0.4108	105	38.8083	38.8083	38.2700	38.2700
54	0.2725	0.5608	0.1867	0.4525	106	40.5258	40.5258	40.0908	40.0908
55	0.2933	0.6142	0.2058	0.4992	107	42.6983	42.6983	42.2725	42.2725
56	0.3125	0.6742	0.2250	0.5525	108	44.9842	44.9842	44.5708	44.5708
57	0.3325	0.7425	0.2433	0.6125	109	47.3892	47.3892	46.9908	46.9908
58	0.3542	0.8200	0.2633	0.6792	110	49.9192	49.9192	49.5392	49.5392
59	0.3808	0.9092	0.2842	0.7525	111	52.5800	52.5800	52.2208	52.2208
60	0.4142	1.0108	0.3083	0.8350	112	55.3775	55.3775	55.0425	55.0425
61	0.4583	1.1275	0.3375	0.9267	113	58.3175	58.3175	58.0100	58.0100
62	0.5092	1.2583	0.3700	1.0267	114	61.4058	61.4058	61.1292	61.1292
63	0.5675	1.4017	0.4075	1.1367	115	64.6483	64.6483	64.4067	64.4067
64	0.6308	1.5600	0.4475	1.2558	116	68.0500	68.0500	67.8483	67.8483
65	0.6992	1.7325	0.4917	1.3850	117	71.6167	71.6167	71.4583	71.4583
66	0.7717	1.9150	0.5392	1.5233	118	75.3508	75.3508	75.2408	75.2408
67	0.8517	2.1058	0.5900	1.6708	119	79.2567	79.2567	79.1992	79.1992
68	0.9408	2.3108	0.6467	1.8250	120	83.3333	83.3333	83.3333	83.3333
69	1.0442	2.5358	0.7125	1.9908					

Appendix B
Unamortized Unused Initial Expense Allowance (calculated under 3.0% guaranteed interest rate and 2017 CSO mortality)

Insert "Expense Allowance GULE 2017 CSO - Sex Distinct.xls," "Expense Allowance GULE 2017 CSO - Sex Distinct.pdf"

Appendix C
Surrender Charge per 1,000 Specified Amount

Insert "Surrender Charges GULE 2017 CSO - Sex Distinct.xls," "Surrender Charges GULE 2017 CSO - Sex Distinct.pdf"

Appendix D
Unit Load Per 1,000 Specified Amount

Insert "Unit Loads GULE 2017 CSO – Sex Distinct.xls," "Unit Loads GULE 2017 CSO – Sex Distinct.pdf"

Appendix E
Minimum Guaranteed Cash Value
Male, Standard Nontobacco, $300 Annual Premium, Issue age 35, $25,000 Specified Amount

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$ 118	$ -	$25,000
2	$ 237	$ -	$25,000
3	$ 355	$ -	$25,000
4	$ 475	$ -	$25,000
5	$ 596	$ 71	$25,000
6	$ 720	$ 195	$25,000
7	$ 845	$ 345	$25,000
8	$ 972	$ 522	$25,000
9	$ 1,100	$ 675	$25,000
10	$ 1,231	$ 856	$25,000
11	$ 1,364	$ 1,039	$25,000
12	$ 1,500	$ 1,200	$25,000
13	$ 1,639	$ 1,389	$25,000
14	$ 1,781	$ 1,556	$25,000
15	$ 1,924	$ 1,749	$25,000
16	$ 2,069	$ 1,919	$25,000
17	$ 2,214	$ 2,114	$25,000
18	$ 2,359	$ 2,284	$25,000
19	$ 2,502	$ 2,477	$25,000
20	$ 2,645	$ 2,645	$25,000

Appendix F

CERTIFICATION OF COMPLIANCE

  In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

  I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the actual excess first year expenses is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L. Kohlhaase

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David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary
October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
POLICY FORM: A999LNA06P

I.   INTRODUCTION

Product Description: Simplified Issue Flexible Premium Universal Life Insurance payable at death. Maturity at age 120. After age 94 and prior to maturity the death benefit will be based on the greater of the specified amount and 101% of the accumulation value. The minimum specified amount at issue is $25,000. This product incorporates a no-lapse guarantee provided the cumulative monthly premium requirement is met. The policy will lapse if the cash surrender value is not positive, unless the no-lapse guarantee is in effect. No-lapse guarantee periods can go to age 120 for all issue ages. This product is not banded and there is only a standard class.

Issue Ages: 18-70

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the [2017] Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are not allowed. Monthly guaranteed mortality charges were found by multiplying the annual rates by a factor of (1/12), while capping the annual rate at 1. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are not allowed.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the [2017] Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female Blended, Smoker and Nonsmoker. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 3.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 3.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii)

the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

The expense charges for this policy are the $5 per month fee, a per 1,000 of specified amount load and a guaranteed premium charge of 25% of each premium payment. There is no additional expense allowance taken. Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the $5 per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The unused initial expense allowance is equal to the full initial expense allowance. This is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

      policy (endowment at age 120)

$$E = 10 + 1.25 \cdot \min \left[\begin{array}{c} P_x^{NNL} \\ 40 \end{array} \right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on guaranteed mortality (2017 CSO) and a guaranteed interest rate of 3.0%.

Due to guaranteed mortality charges differing by risk class, the unamortized unused initial expense allowances must differ by risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Nontobacco
$25,000 specified amount
guaranteed assumptions (e.g. 3.00% credited interest)
annual premium = $290

$$P^{NNL}_{35} = 10.05$$

$$E = 10 + 1.25 \cdot min\left[\frac{10.05}{40}\right] = 22.57$$

$_tAV$ = Accumulation value at the end of year t

$_tCSV$ = Cash surrender value at the end of year t

$_tSC$ = Surrender charge for year t

$_5AV = 580$

$_5SC = 525$

$_5CSV = {_5}AV - {_5}SC = 580 - 525 = 55$

$_5SC^{max}$ = maximum allowable surrender charge in 5th duration
based on E, for a $100,000 policy.

$$_5SC^{max} = 25 \cdot E \cdot \frac{a_{x+t}}{a_x} = 25 \cdot 22.57 \cdot \frac{24.2677}{25.5243} = 564 \cdot .95077 = 536 > 525$$

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary
October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly Per $1,000 Net Amount at Risk

Age	Nont	Tob		Age	Nont	Tob
18	0.0588	0.0588		70	1.0912	2.6670
19	0.0608	0.0615		71	1.2253	2.9358
20	0.0620	0.0633		72	1.3833	3.2300
21	0.0620	0.0653		73	1.5655	3.5470
22	0.0607	0.0675		74	1.7723	3.8783
23	0.0600	0.0700		75	2.0015	4.2160
24	0.0600	0.0733		76	2.2548	4.5555
25	0.0580	0.0740		77	2.5370	4.8998
26	0.0507	0.0742		78	2.8565	5.2568
27	0.0470	0.0735		79	3.2260	5.6467
28	0.0462	0.0725		80	3.6562	6.0855
29	0.0438	0.0730		81	4.1420	6.5628
30	0.0428	0.0748		82	4.6893	7.1530
31	0.0458	0.0788		83	5.3228	7.8883
32	0.0493	0.0848		84	6.0793	8.6960
33	0.0547	0.0920		85	6.9545	9.6233
34	0.0635	0.1003		86	7.9392	10.6732
35	0.0737	0.1098		87	9.0623	11.8082
36	0.0847	0.1213		88	10.3113	13.0255
37	0.0953	0.1343		89	11.6595	14.2933
38	0.1038	0.1492		90	13.0783	15.5807
39	0.1097	0.1680		91	14.5312	16.8525
40	0.1145	0.1873		92	15.9983	18.0965
41	0.1207	0.2070		93	17.4382	19.2777
42	0.1273	0.2255		94	18.7948	20.3492
43	0.1340	0.2420		95	20.2425	21.5038
44	0.1382	0.2545		96	21.9280	22.9070
45	0.1425	0.2693		97	23.7452	24.4408
46	0.1478	0.2877		98	25.6970	26.1150
47	0.1535	0.3078		99	27.7465	27.8985
48	0.1607	0.3303		100	29.7623	29.7623
49	0.1688	0.3553		101	31.6583	31.6583
50	0.1795	0.3842		102	33.5332	33.5332
51	0.1947	0.4165		103	35.3533	35.3533
52	0.2137	0.4532		104	37.0868	37.0868
53	0.2340	0.4935		105	38.7007	38.7007
54	0.2553	0.5392		106	40.4388	40.4388

55	0.2758	0.5912		107	42.6132	42.6132
56	0.2950	0.6498		108	44.9015	44.9015
57	0.3147	0.7165		109	47.3095	47.3095
58	0.3360	0.7918		110	49.8432	49.8432
59	0.3615	0.8778		111	52.5082	52.5082
60	0.3930	0.9757		112	55.3105	55.3105
61	0.4342	1.0873		113	58.2560	58.2560
62	0.4813	1.2120		114	61.3505	61.3505
63	0.5355	1.3487		115	64.6000	64.6000
64	0.5942	1.4992		116	68.0097	68.0097
65	0.6577	1.6630		117	71.5850	71.5850
66	0.7252	1.8367		118	75.3288	75.3288
67	0.7993	2.0188		119	79.2452	79.2452
68	0.8820	2.2137		120	83.3333	83.3333
69	0.9778	2.4268				

Appendix B
Unamortized Unused Initial Expense Allowance (calculated under 3.0% guaranteed interest rate and 2017 CSO mortality)
Insert "Expense Allowance GULE 2017 CSO - Unisex.xls," "Expense Allowance GULE 2017 CSO – Unisex.pdf"

Appendix C
Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges GULE 2017 CSO - Unisex.xls," "Surrender Charges GULE 2017 CSO – Unisex.pdf"

Appendix D
Unit Load Per 1,000 Specified Amount
Insert "Unit Loads GULE 2017 CSO - Unisex.xls," "Unit Loads GULE 2017 CSO - Unisex.pdf"

Appendix E

Minimum Guaranteed Cash Value
Standard Nontobacco, $873.19 Annual Premium, Issue age 35, $100,000 Specified Amount

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$ 114	$ -	$25,000
2	$ 229	$ -	$25,000
3	$ 344	$ -	$25,000
4	$ 461	$ -	$25,000
5	$ 580	$ 55	$25,000
6	$ 701	$ 176	$25,000
7	$ 826	$ 351	$25,000
8	$ 952	$ 502	$25,000
9	$ 1,082	$ 682	$25,000
10	$ 1,215	$ 840	$25,000
11	$ 1,351	$ 1,026	$25,000
12	$ 1,490	$ 1,190	$25,000
13	$ 1,633	$ 1,383	$25,000
14	$ 1,777	$ 1,552	$25,000
15	$ 1,924	$ 1,749	$25,000
16	$ 2,073	$ 1,923	$25,000
17	$ 2,222	$ 2,122	$25,000
18	$ 2,372	$ 2,297	$25,000
19	$ 2,521	$ 2,496	$25,000
20	$ 2,669	$ 2,669	$25,000

Appendix F

CERTIFICATION OF COMPLIANCE

       In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

       I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:
- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the actual excess first year expenses is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary
October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
TERM LIFE INSURANCE RIDER ON ADDITIONAL INSURED – Other than Insured
Rider Form D633LDC17R

I.   Introduction

Rider Description: This rider is a cost rider that can only be added at issue. It provides term coverage on someone other than the base insured renewable to age 100 and convertible to age 75.

Upon death of the primary insured, coverage will continue on the additional insured for the remainder of the period purchased by the monthly rider charge.

Issue Ages: 0-90
Minimum Specified Amount: $25,000

Reserves and Cash Values: The reserves for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983. Premiums are not paid separately for this rider. Charges for this rider are integrated into the base contract and are taken into account when determining nonforfeiture benefits on the base contract under model regulation 585. No additional cash values are required for this rider.

Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance rates or the per 1000 loads. Current charges are not guaranteed for any period of time. The rating class will not be changed as a result of changes to current charges.

This rider provides annually renewable term coverage. It is exempt from providing non-forfeiture benefits.

II.   Mortality Table and Interest Rate

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality, Age Last Birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b.

III.   Statutory Reserves

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   Guaranteed Cost of Insurance Charges

Guaranteed Cost of Insurance charges are based on the 2017 Commissioners Standard Ordinary Mortality Age Last Birthday, Male and Female, Smoker and Nonsmoker. Equivalent monthly charges were derived by taking the annual rates in the above table multiplied by 1/12. They are listed in the Appendix A.

Guaranteed per 1000 loads are the same as the base contract and vary by attained age, sex, risk class and band.

_____

David L Kohlhaase, Jr. FSA, CERA, MAAA

Managing Actuary

October 1, 2019

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Appendix

Guaranteed Cost of Insurance Charges
Monthly / $1000 Benefit

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
0	0.0200		0.0217		51	0.2100	0.4358	0.1333	0.3392
1	0.0125		0.0117		52	0.2300	0.4733	0.1483	0.3725
2	0.0108		0.0075		53	0.2508	0.5142	0.1667	0.4108
3	0.0100		0.0067		54	0.2725	0.5608	0.1867	0.4525
4	0.0092		0.0067		55	0.2933	0.6142	0.2058	0.4992
5	0.0083		0.0075		56	0.3125	0.6742	0.2250	0.5525
6	0.0083		0.0075		57	0.3325	0.7425	0.2433	0.6125
7	0.0075		0.0067		58	0.3542	0.8200	0.2633	0.6792
8	0.0075		0.0067		59	0.3808	0.9092	0.2842	0.7525
9	0.0075		0.0067		60	0.4142	1.0108	0.3083	0.8350
10	0.0083		0.0075		61	0.4583	1.1275	0.3375	0.9267
11	0.0092		0.0075		62	0.5092	1.2583	0.3700	1.0267
12	0.0117		0.0067		63	0.5675	1.4017	0.4075	1.1367
13	0.0167		0.0075		64	0.6308	1.5600	0.4475	1.2558
14	0.0242		0.0125		65	0.6992	1.7325	0.4917	1.3850
15	0.0350		0.0192		66	0.7717	1.9150	0.5392	1.5233
16	0.0492		0.0250		67	0.8517	2.1058	0.5900	1.6708
17	0.0650		0.0275		68	0.9408	2.3108	0.6467	1.8250
18	0.0667	0.0667	0.0275	0.0275	69	1.0442	2.5358	0.7125	1.9908
19	0.0692	0.0700	0.0275	0.0275	70	1.1667	2.7900	0.7892	2.1750
20	0.0708	0.0725	0.0267	0.0267	71	1.3117	3.0783	0.8800	2.3658
21	0.0708	0.0750	0.0267	0.0267	72	1.4825	3.3967	0.9867	2.5633
22	0.0692	0.0775	0.0267	0.0275	73	1.6792	3.7392	1.1108	2.7783
23	0.0683	0.0800	0.0267	0.0300	74	1.9017	4.0942	1.2550	3.0150
24	0.0683	0.0833	0.0267	0.0333	75	2.1467	4.4508	1.4208	3.2767
25	0.0658	0.0842	0.0267	0.0333	76	2.4158	4.8025	1.6108	3.5675
26	0.0567	0.0842	0.0267	0.0342	77	2.7133	5.1525	1.8317	3.8892
27	0.0517	0.0833	0.0283	0.0342	78	3.0475	5.5100	2.0925	4.2442
28	0.0500	0.0817	0.0308	0.0358	79	3.4308	5.8892	2.4067	4.6767
29	0.0467	0.0817	0.0325	0.0383	80	3.8758	6.3017	2.7775	5.2208
30	0.0450	0.0833	0.0342	0.0408	81	4.3842	6.7400	3.1733	5.8542
31	0.0483	0.0875	0.0358	0.0442	82	4.9658	7.2992	3.5833	6.5683
32	0.0517	0.0942	0.0400	0.0475	83	5.6400	8.0275	4.0542	7.3317
33	0.0567	0.1008	0.0467	0.0567	84	6.4233	8.8533	4.7033	8.0667
34	0.0658	0.1083	0.0542	0.0683	85	7.3308	9.7908	5.4492	8.9533
35	0.0767	0.1175	0.0617	0.0792	86	8.3767	10.8433	6.1892	9.9925
36	0.0883	0.1283	0.0700	0.0933	87	9.5683	12.0075	7.0383	11.0108
37	0.1000	0.1408	0.0767	0.1083	88	10.8875	13.2550	8.0067	12.1075
38	0.1092	0.1558	0.0825	0.1225	89	12.3058	14.5508	9.0742	13.2633
39	0.1158	0.1767	0.0850	0.1333	90	13.7908	15.8642	10.2283	14.4467
40	0.1217	0.1983	0.0858	0.1433	91	15.2967	17.1533	11.4692	15.6492
41	0.1292	0.2208	0.0867	0.1517	92	16.7950	18.4000	12.8117	16.8825
42	0.1375	0.2417	0.0867	0.1608	93	18.2442	19.5758	14.2142	18.0850
43	0.1458	0.2600	0.0867	0.1700	94	19.5758	20.6258	15.6708	19.2425
44	0.1508	0.2733	0.0875	0.1792	95	20.9667	21.7442	17.3458	20.5425
45	0.1558	0.2883	0.0892	0.1933	96	22.5858	23.1242	19.2967	22.0383
46	0.1617	0.3067	0.0925	0.2117	97	24.3242	24.6525	21.4292	23.5942
47	0.1675	0.3267	0.0975	0.2325	98	26.1883	26.3492	23.7317	25.1783
48	0.1750	0.3492	0.1033	0.2550	99	28.1400	28.1867	26.1725	26.7458
49	0.1833	0.3742	0.1108	0.2800	100	0.0000	0.0000	0.0000	0.0000
50	0.1942	0.4033	0.1208	0.3075					

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UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
IUL – Sex Distinct
Form D499LDC14P

I.   INTRODUCTION

Product Description: Flexible Premium Index-Linked Universal Life Insurance payable at death. Maturity is at age 120. The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited. There are multiple index-linked accounts and a fixed interest option from which the owner may choose to allocate premiums. Premiums will be allocated initially to a short term holding account which will receive interest at the same rate as the fixed interest account. On a sweep date, the premium will be allocated to the fixed interest and index linked accounts in proportions designated by the owner.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Charges other than premium loads are distributed across the different segments and accounts on a pro-rata basis. The pro-rata amount is determined by the segment, short term holding account, and fixed interest account values at the time of the deduction in proportion to the total accumulation value. For purposes of calculating the net amount at risk, the accumulation value is determined by summing segment values, fixed interest accumulation value, and the short term holding account value.

Surrender charges will not change from those shown in Appendix C. Surrender charges are applied to the greater of the original specified amount or the current specified amount.

We credit fixed interest using a portfolio-year method. Credited interest is guaranteed to be not less than 2% for the fixed interest account and 0% for the index-linked accounts. Current credited fixed interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread. Interest on Index Linked accounts are credited at the segment maturity date. The amount credited is the index value at the segment maturity multiplied by the segment index rate. The segment index rate being the following:

$$\frac{Index_{End\ of\ Segment} - Index_{Beginning\ of\ Segment}}{Index_{Beginning\ of\ Segment}} \times Participation\ Rate$$

The segment index rate is subject to the cap set at the beginning of the segment and floor set at issue.

This product incorporates a traditional cumulative no-lapse provision. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premium accumulated at 2% to determine if the No-Lapse Protection continues. While the No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
      No-Lapse Protection Guarantee Period: Minimum (10, Maximum (5, 85 – Issue Age))

Two types of loans are available. The first is a standard loan. When selected, the standard loan will require sufficient value within the fixed interest account to cover any loan amount. If there is insufficient value, the policy will transfer the necessary funds to the fixed account on a pro rata basis from the index account. The loan will be credited at the guaranteed interest rate of the fixed account and charged interest based on the schedule in the contract.

The second loan type is an indexed loan. This loan requires sufficient value be in the indexed accounts to accommodate the loan. If necessary, money will be moved from the fixed account to the indexed accounts based on current allocations to the next available segment. At segment maturities, interest will be credited in accordance with the indexed account return. The index loan will be charged interest at a declared rate set by the company but not to exceed the maximum rate set in the contract.

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $100,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Definition of life insurance will be set based on the Guideline Premium Test. There are two death benefit option types available, level and increasing.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. For attained ages less than 18, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 18 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum\limits_{2}^{20} Charges_t}{19}$$

Where Charges$_t$ = PercentOfPremLoad$_t$ * Prem$_t$ + (UnitLoad$_t$ * Units + perPolicyLoad$_t$)*12

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 100)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a$_{x+t}$ and a$_x$ are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Male Age 35, Standard Nontobacco
   $100,000 specified amount
   guaranteed assumptions (e.g. 2.00% credited interest)
   annual premium = $880

$$\text{IAEC} = \left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20} \left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$$P_{35}^{\text{NNL}} = 13.06$$

$$E = 10 + 1.25 \cdot min \begin{bmatrix} 13.06 \\ 40 \end{bmatrix} = 26.32$$

$_t AV$ = Accumulation value at the end of year t

$_t CSV$ = Cash surrender value at the end of year t

$_t SC$ = Surrender charge for year t

$_6 AV = 2{,}133$

$_6 SC = 1{,}600$

$_6 CSV = {}_6 AV - {}_6 SC = 2{,}133 - 1{,}600 = 533$

$_6 SC^{max}$ = maximum allowable surrender charge in 6th duration
        based on E, for a $100,000 policy.

$$_6 SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.32 \cdot \frac{28.2669}{30.6147} = 2{,}632 \cdot .92331 = 2{,}430 > 1{,}600$$

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly / $1000 Net Amount at Risk

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
0	0.0200		0.0217		61	0.4583	1.1275	0.3375	0.9267
1	0.0125		0.0117		62	0.5092	1.2583	0.3700	1.0267
2	0.0108		0.0075		63	0.5675	1.4017	0.4075	1.1367
3	0.0100		0.0067		64	0.6308	1.5600	0.4475	1.2558
4	0.0092		0.0067		65	0.6992	1.7325	0.4917	1.3850
5	0.0083		0.0075		66	0.7717	1.9150	0.5392	1.5233
6	0.0083		0.0075		67	0.8517	2.1058	0.5900	1.6708
7	0.0075		0.0067		68	0.9408	2.3108	0.6467	1.8250
8	0.0075		0.0067		69	1.0442	2.5358	0.7125	1.9908
9	0.0075		0.0067		70	1.1667	2.7900	0.7892	2.1750
10	0.0083		0.0075		71	1.3117	3.0783	0.8800	2.3658
11	0.0092		0.0075		72	1.4825	3.3967	0.9867	2.5633
12	0.0117		0.0067		73	1.6792	3.7392	1.1108	2.7783
13	0.0167		0.0075		74	1.9017	4.0942	1.2550	3.0150
14	0.0242		0.0125		75	2.1467	4.4508	1.4208	3.2767
15	0.0350		0.0192		76	2.4158	4.8025	1.6108	3.5675
16	0.0492		0.0250		77	2.7133	5.1525	1.8317	3.8892
17	0.0650		0.0275		78	3.0475	5.5100	2.0925	4.2442
18	0.0667	0.0667	0.0275	0.0275	79	3.4308	5.8892	2.4067	4.6767
19	0.0692	0.0700	0.0275	0.0275	80	3.8758	6.3017	2.7775	5.2208
20	0.0708	0.0725	0.0267	0.0267	81	4.3842	6.7400	3.1733	5.8542
21	0.0708	0.0750	0.0267	0.0267	82	4.9658	7.2992	3.5833	6.5683
22	0.0692	0.0775	0.0267	0.0275	83	5.6400	8.0275	4.0542	7.3317
23	0.0683	0.0800	0.0267	0.0300	84	6.4233	8.8533	4.7033	8.0667
24	0.0683	0.0833	0.0267	0.0333	85	7.3308	9.7908	5.4492	8.9533
25	0.0658	0.0842	0.0267	0.0333	86	8.3767	10.8433	6.1892	9.9925
26	0.0567	0.0842	0.0267	0.0342	87	9.5683	12.0075	7.0383	11.0108
27	0.0517	0.0833	0.0283	0.0342	88	10.8875	13.2550	8.0067	12.1075
28	0.0500	0.0817	0.0308	0.0358	89	12.3058	14.5508	9.0742	13.2633
29	0.0467	0.0817	0.0325	0.0383	90	13.7908	15.8642	10.2283	14.4467
30	0.0450	0.0833	0.0342	0.0408	91	15.2967	17.1533	11.4692	15.6492
31	0.0483	0.0875	0.0358	0.0442	92	16.7950	18.4000	12.8117	16.8825
32	0.0517	0.0942	0.0400	0.0475	93	18.2442	19.5758	14.2142	18.0850
33	0.0567	0.1008	0.0467	0.0567	94	19.5758	20.6258	15.6708	19.2425
34	0.0658	0.1083	0.0542	0.0683	95	20.9667	21.7442	17.3458	20.5425

Appendix A Cont.

35	0.0767	0.1175	0.0617	0.0792	96	22.5858	23.1242	19.2967	22.0383
36	0.0883	0.1283	0.0700	0.0933	97	24.3242	24.6525	21.4292	23.5942
37	0.1000	0.1408	0.0767	0.1083	98	26.1883	26.3492	23.7317	25.1783
38	0.1092	0.1558	0.0825	0.1225	99	28.1400	28.1867	26.1725	26.7458
39	0.1158	0.1767	0.0850	0.1333	100	30.0742	30.0742	28.5150	28.5150
40	0.1217	0.1983	0.0858	0.1433	101	31.9217	31.9217	30.6050	30.6050
41	0.1292	0.2208	0.0867	0.1517	102	33.7517	33.7517	32.6592	32.6592
42	0.1375	0.2417	0.0867	0.1608	103	35.5308	35.5308	34.6433	34.6433
43	0.1458	0.2600	0.0867	0.1700	104	37.2275	37.2275	36.5242	36.5242
44	0.1508	0.2733	0.0875	0.1792	105	38.8083	38.8083	38.2700	38.2700
45	0.1558	0.2883	0.0892	0.1933	106	40.5258	40.5258	40.0908	40.0908
46	0.1617	0.3067	0.0925	0.2117	107	42.6983	42.6983	42.2725	42.2725
47	0.1675	0.3267	0.0975	0.2325	108	44.9842	44.9842	44.5708	44.5708
48	0.1750	0.3492	0.1033	0.2550	109	47.3892	47.3892	46.9908	46.9908
49	0.1833	0.3742	0.1108	0.2800	110	49.9192	49.9192	49.5392	49.5392
50	0.1942	0.4033	0.1208	0.3075	111	52.5800	52.5800	52.2208	52.2208
51	0.2100	0.4358	0.1333	0.3392	112	55.3775	55.3775	55.0425	55.0425
52	0.2300	0.4733	0.1483	0.3725	113	58.3175	58.3175	58.0100	58.0100
53	0.2508	0.5142	0.1667	0.4108	114	61.4058	61.4058	61.1292	61.1292
54	0.2725	0.5608	0.1867	0.4525	115	64.6483	64.6483	64.4067	64.4067
55	0.2933	0.6142	0.2058	0.4992	116	68.0500	68.0500	67.8483	67.8483
56	0.3125	0.6742	0.2250	0.5525	117	71.6167	71.6167	71.4583	71.4583
57	0.3325	0.7425	0.2433	0.6125	118	75.3508	75.3508	75.2408	75.2408
58	0.3542	0.8200	0.2633	0.6792	119	79.2567	79.2567	79.1992	79.1992
59	0.3808	0.9092	0.2842	0.7525	120	83.3333	83.3333	83.3333	83.3333
60	0.4142	1.0108	0.3083	0.8350					

Appendix B

Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance IUL1 2017 CSO – Sex Distinct.xlsm," "Expense Allowance IUL1 2017 CSO – Sex Distinct.pdf"

Appendix C

Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges IUL1 2017 CSO – Sex Distinct.xlsm," "Surrender Charges IUL1 2017 CSO – Sex Distinct.pdf"

Appendix D

Guaranteed Monthly Unit Loads per 1,000 Specified Amount
Insert "Unit Loads 2015 IUL – Sex Distinct.xls"

Appendix E

Minimum Guaranteed Cash Value
Male, Standard Nontobacco, $880 Annual Premium, Issue age 35, $100,000 Specified Amount
100% Fixed Account allocation

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$367	$0	$100,000
2	$727	$0	$100,000
3	$1,081	$0	$100,000
4	$1,432	$0	$100,000
5	$1,783	$0	$100,000
6	$2,133	$533	$100,000
7	$2,483	$1,083	$100,000
8	$2,830	$1,630	$100,000
9	$3,175	$2,075	$100,000
10	$3,522	$2,622	$100,000
11	$3,871	$3,171	$100,000
12	$4,220	$3,720	$100,000
13	$4,571	$4,271	$100,000
14	$4,920	$4,820	$100,000
15	$5,268	$5,268	$100,000
16	$5,611	$5,611	$100,000
17	$5,944	$5,944	$100,000
18	$6,262	$6,262	$100,000
19	$6,563	$6,563	$100,000
20	$6,847	$6,847	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

       In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

       I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
IUL – Sex Distinct
Form D534LDC14P

I. INTRODUCTION

Product Description: Flexible Premium Index-Linked Universal Life Insurance payable at death. Maturity is at age 120. The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited. There are multiple index-linked accounts and a fixed interest option from which the owner may choose to allocate premiums. Premiums will be allocated initially to a short term holding account which will receive interest at the same rate as the fixed interest account. On a sweep date, the premium will be allocated to the fixed interest and index linked accounts in proportions designated by the owner.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Charges other than premium loads are distributed across the different segments and accounts on a pro-rata basis. The pro-rata amount is determined by the segment, short term holding account, and fixed interest account values at the time of the deduction in proportion to the total accumulation value. For purposes of calculating the net amount at risk, the accumulation value is determined by summing segment values, fixed interest accumulation value, and the short term holding account value.

Surrender charges will not change from those shown in Appendix C. Surrender charges are applied to the greater of the original specified amount or the current specified amount.

We credit fixed interest using a portfolio-year method. Credited interest is guaranteed to be not less than 2% for the fixed interest account and 0% for the index-linked accounts. Current credited fixed interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread. Interest on Index Linked accounts are credited at the segment maturity date. The amount credited is the index value at the segment maturity multiplied by the segment index rate. The segment index rate being the following:

$$\frac{Index_{End\ of\ Segment} - Index_{Beginning\ of\ Segment}}{Index_{Beginning\ of\ Segment}} \times Participation\ Rate$$

The segment index rate is subject to the cap set at the beginning of the segment and floor set at issue.

This product incorporates a traditional cumulative no-lapse provision. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premium accumulated at 2% to determine if the No-Lapse Protection continues. While the No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
No-Lapse Protection Guarantee Period: Minimum (10, Maximum (5, 85 – Issue Age))

Two types of loans are available. The first is a standard loan. When selected, the standard loan will require sufficient value within the fixed interest account to cover any loan amount. If there is insufficient value, the policy will transfer the necessary funds to the fixed account on a pro rata basis from the index account. The loan will be credited at the guaranteed interest rate of the fixed account and charged interest based on the schedule in the contract.

The second loan type is an indexed loan. This loan requires sufficient value be in the indexed accounts to accommodate the loan. If necessary, money will be moved from the fixed account to the indexed accounts based on current allocations to the next available segment. At segment maturities, interest will be credited in accordance with the indexed account return. The index loan will be charged interest at a declared rate set by the company but not to exceed the maximum rate set in the contract.

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $100,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Definition of life insurance will be set based on the Cash Value Accumulation Test. There are two death benefit option types available, level and increasing.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II. MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, Male and Female, Smoker and Nonsmoker. For attained ages less than 18, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 18 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III. STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV. CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum_{2}^{20} Charges_t}{19}$$

Where $Charges_t = PercentOfPremLoad_t * Prem_t + (UnitLoad_t * Units + perPolicyLoad_t)*12$

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 100)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40} \right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \frac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by sex and risk class, the unamortized unused initial expense allowances must differ by sex and risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by sex and risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Male Age 35, Standard Nontobacco
    $100,000 specified amount
    guaranteed assumptions (e.g. 2.00% credited interest)
    annual premium = $880

$$\text{IAEC} = \left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$$P_{35}^{NNL} = 13.06$$

$$E = 10 + 1.25 \cdot min\begin{bmatrix}13.06\\40\end{bmatrix} = 26.32$$

$_t AV$ = Accumulation value at the end of year t

$_t CSV$ = Cash surrender value at the end of year t

$_t SC$ = Surrender charge for year t

$_6 AV = 2{,}133$

$_6 SC = 1{,}600$

$_6 CSV = {_6}AV - {_6}SC = 2{,}133 - 1{,}600 = 533$

$_6 SC^{max}$ = maximum allowable surrender charge in 6th duration
        based on E, for a $100,000 policy.

$$_6 SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.32 \cdot \frac{28.2669}{30.6147} = 2{,}632 \cdot .92331 = 2{,}430 > 1{,}600$$

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly / $1000 Net Amount at Risk

AGE	Male Nont	Male Tob	Female Nont	Female Tob	AGE	Male Nont	Male Tob	Female Nont	Female Tob
0	0.0200		0.0217		61	0.4583	1.1275	0.3375	0.9267
1	0.0125		0.0117		62	0.5092	1.2583	0.3700	1.0267
2	0.0108		0.0075		63	0.5675	1.4017	0.4075	1.1367
3	0.0100		0.0067		64	0.6308	1.5600	0.4475	1.2558
4	0.0092		0.0067		65	0.6992	1.7325	0.4917	1.3850
5	0.0083		0.0075		66	0.7717	1.9150	0.5392	1.5233
6	0.0083		0.0075		67	0.8517	2.1058	0.5900	1.6708
7	0.0075		0.0067		68	0.9408	2.3108	0.6467	1.8250
8	0.0075		0.0067		69	1.0442	2.5358	0.7125	1.9908
9	0.0075		0.0067		70	1.1667	2.7900	0.7892	2.1750
10	0.0083		0.0075		71	1.3117	3.0783	0.8800	2.3658
11	0.0092		0.0075		72	1.4825	3.3967	0.9867	2.5633
12	0.0117		0.0067		73	1.6792	3.7392	1.1108	2.7783
13	0.0167		0.0075		74	1.9017	4.0942	1.2550	3.0150
14	0.0242		0.0125		75	2.1467	4.4508	1.4208	3.2767
15	0.0350		0.0192		76	2.4158	4.8025	1.6108	3.5675
16	0.0492		0.0250		77	2.7133	5.1525	1.8317	3.8892
17	0.0650		0.0275		78	3.0475	5.5100	2.0925	4.2442
18	0.0667	0.0667	0.0275	0.0275	79	3.4308	5.8892	2.4067	4.6767
19	0.0692	0.0700	0.0275	0.0275	80	3.8758	6.3017	2.7775	5.2208
20	0.0708	0.0725	0.0267	0.0267	81	4.3842	6.7400	3.1733	5.8542
21	0.0708	0.0750	0.0267	0.0267	82	4.9658	7.2992	3.5833	6.5683
22	0.0692	0.0775	0.0267	0.0275	83	5.6400	8.0275	4.0542	7.3317
23	0.0683	0.0800	0.0267	0.0300	84	6.4233	8.8533	4.7033	8.0667
24	0.0683	0.0833	0.0267	0.0333	85	7.3308	9.7908	5.4492	8.9533
25	0.0658	0.0842	0.0267	0.0333	86	8.3767	10.8433	6.1892	9.9925
26	0.0567	0.0842	0.0267	0.0342	87	9.5683	12.0075	7.0383	11.0108
27	0.0517	0.0833	0.0283	0.0342	88	10.8875	13.2550	8.0067	12.1075
28	0.0500	0.0817	0.0308	0.0358	89	12.3058	14.5508	9.0742	13.2633
29	0.0467	0.0817	0.0325	0.0383	90	13.7908	15.8642	10.2283	14.4467
30	0.0450	0.0833	0.0342	0.0408	91	15.2967	17.1533	11.4692	15.6492
31	0.0483	0.0875	0.0358	0.0442	92	16.7950	18.4000	12.8117	16.8825
32	0.0517	0.0942	0.0400	0.0475	93	18.2442	19.5758	14.2142	18.0850
33	0.0567	0.1008	0.0467	0.0567	94	19.5758	20.6258	15.6708	19.2425
34	0.0658	0.1083	0.0542	0.0683	95	20.9667	21.7442	17.3458	20.5425

35	0.0767	0.1175	0.0617	0.0792	96	22.5858	23.1242	19.2967	22.0383
36	0.0883	0.1283	0.0700	0.0933	97	24.3242	24.6525	21.4292	23.5942
37	0.1000	0.1408	0.0767	0.1083	98	26.1883	26.3492	23.7317	25.1783
38	0.1092	0.1558	0.0825	0.1225	99	28.1400	28.1867	26.1725	26.7458
39	0.1158	0.1767	0.0850	0.1333	100	30.0742	30.0742	28.5150	28.5150
40	0.1217	0.1983	0.0858	0.1433	101	31.9217	31.9217	30.6050	30.6050
41	0.1292	0.2208	0.0867	0.1517	102	33.7517	33.7517	32.6592	32.6592
42	0.1375	0.2417	0.0867	0.1608	103	35.5308	35.5308	34.6433	34.6433
43	0.1458	0.2600	0.0867	0.1700	104	37.2275	37.2275	36.5242	36.5242
44	0.1508	0.2733	0.0875	0.1792	105	38.8083	38.8083	38.2700	38.2700
45	0.1558	0.2883	0.0892	0.1933	106	40.5258	40.5258	40.0908	40.0908
46	0.1617	0.3067	0.0925	0.2117	107	42.6983	42.6983	42.2725	42.2725
47	0.1675	0.3267	0.0975	0.2325	108	44.9842	44.9842	44.5708	44.5708
48	0.1750	0.3492	0.1033	0.2550	109	47.3892	47.3892	46.9908	46.9908
49	0.1833	0.3742	0.1108	0.2800	110	49.9192	49.9192	49.5392	49.5392
50	0.1942	0.4033	0.1208	0.3075	111	52.5800	52.5800	52.2208	52.2208
51	0.2100	0.4358	0.1333	0.3392	112	55.3775	55.3775	55.0425	55.0425
52	0.2300	0.4733	0.1483	0.3725	113	58.3175	58.3175	58.0100	58.0100
53	0.2508	0.5142	0.1667	0.4108	114	61.4058	61.4058	61.1292	61.1292
54	0.2725	0.5608	0.1867	0.4525	115	64.6483	64.6483	64.4067	64.4067
55	0.2933	0.6142	0.2058	0.4992	116	68.0500	68.0500	67.8483	67.8483
56	0.3125	0.6742	0.2250	0.5525	117	71.6167	71.6167	71.4583	71.4583
57	0.3325	0.7425	0.2433	0.6125	118	75.3508	75.3508	75.2408	75.2408
58	0.3542	0.8200	0.2633	0.6792	119	79.2567	79.2567	79.1992	79.1992
59	0.3808	0.9092	0.2842	0.7525	120	83.3333	83.3333	83.3333	83.3333
60	0.4142	1.0108	0.3083	0.8350					

Appendix B

Unamortized Unused Initial Expense Allowance
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Male, Standard Nontobacco, $880 Annual Premium, Issue age 35, $100,000 Specified Amount
100% Fixed Account allocation

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$367	$0	$100,000
2	$727	$0	$100,000
3	$1,081	$0	$100,000
4	$1,432	$0	$100,000
5	$1,783	$0	$100,000
6	$2,133	$533	$100,000
7	$2,483	$1,083	$100,000
8	$2,830	$1,630	$100,000
9	$3,175	$2,075	$100,000
10	$3,522	$2,622	$100,000
11	$3,871	$3,171	$100,000
12	$4,220	$3,720	$100,000
13	$4,571	$4,271	$100,000
14	$4,920	$4,820	$100,000
15	$5,268	$5,268	$100,000
16	$5,611	$5,611	$100,000
17	$5,944	$5,944	$100,000
18	$6,262	$6,262	$100,000
19	$6,563	$6,563	$100,000
20	$6,847	$6,847	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:
- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
IUL – Unisex
Form D500LDC14P

I.   INTRODUCTION

Product Description: Flexible Premium Index-Linked Universal Life Insurance payable at death. Maturity is at age 120. The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited. There are multiple index-linked accounts and a fixed interest option from which the owner may choose to allocate premiums. Premiums will be allocated initially to a short term holding account which will receive interest at the same rate as the fixed interest account. On a sweep date, the premium will be allocated to the fixed interest and index linked accounts in proportions designated by the owner.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Charges other than premium loads are distributed across the different segments and accounts on a pro-rata basis. The pro-rata amount is determined by the segment, short term holding account, and fixed interest account values at the time of the deduction in proportion to the total accumulation value. For purposes of calculating the net amount at risk, the accumulation value is determined by summing segment values, fixed interest accumulation value, and the short term holding account value.

Surrender charges will not change from those shown in Appendix C. Surrender charges are applied to the greater of the original specified amount or the current specified amount.

We credit fixed interest using a portfolio-year method. Credited interest is guaranteed to be not less than 2% for the fixed interest account and 0% for the index-linked accounts. Current credited fixed interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread. Interest on Index Linked accounts are credited at the segment maturity date. The amount credited is the index value at the segment maturity multiplied by the segment index rate. The segment index rate being the following:

$$\frac{Index_{End\ of\ Segment} - Index_{Beginning\ of\ Segment}}{Index_{Beginning\ of\ Segment}} \times Participation\ Rate$$

The segment index rate is subject to the cap set at the beginning of the segment and floor set at issue.

This product incorporates a traditional cumulative no-lapse provision. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premium accumulated at 2% to determine if the No-Lapse Protection continues. While the No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
        No-Lapse Protection Guarantee Period: Minimum (10, Maximum (5, 85 – Issue Age))

Two types of loans are available. The first is a standard loan. When selected, the standard loan will require sufficient value within the fixed interest account to cover any loan amount. If there is insufficient value, the policy will transfer the necessary funds to the fixed account on a pro rata basis from the index account. The loan will be credited at the guaranteed interest rate of the fixed account and charged interest based on the schedule in the contract.

The second loan type is an indexed loan. This loan requires sufficient value be in the indexed accounts to accommodate the loan. If necessary, money will be moved from the fixed account to the indexed accounts based on current allocations to the next available segment. At segment maturities, interest will be credited in accordance with the indexed account return. The index loan will be charged interest at a declared rate set by the company but not to exceed the maximum rate set in the contract.

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $100,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Definition of life insurance will be set based on the Guideline Premium Test. There are two death benefit option types available, level and increasing.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. For attained ages less than 18, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 18 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum_{2}^{20} Charges_t}{19}$$

Where $Charges_t = PercentOfPremLoad_t * Prem_t + (UnitLoad_t * Units + perPolicyLoad_t)*12$

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 100)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a_{x+t} and a_x are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by risk class, the unamortized unused initial expense allowances must differ by risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Standard Nontobacco
$100,000 specified amount
guaranteed assumptions (e.g. 2.00% credited interest)
annual premium = $880

$$\text{IAEC} = \left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$$P^{NNL}_{35} = 12.82$$

$$E = 10 + 1.25 \cdot min\left[\begin{matrix}12.82\\40\end{matrix}\right] = 26.02$$

$_t AV$ = Accumulation value at the end of year t

$_t CSV$ = Cash surrender value at the end of year t

$_t SC$ = Surrender charge for year t

$_6 AV = 2{,}171$

$_6 SC = 1{,}600$

$_6 CSV = {_6}AV - {_6}SC = 2{,}171 - 1{,}600 = 571$

$_6 SC^{max}$ = maximum allowable surrender charge in 6th duration based on E, for a $100,000 policy.

$$_6 SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.02 \cdot \frac{28.5126}{30.8410} = 2{,}602 \cdot .9245 = 2{,}406 > 1{,}600$$

D. L. Kohlhaase

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly Per $1,000 Net Amount at Risk

AGE	Nont	Tob	AGE	Nont	Tob	AGE	Nont	Tob
0	0.0203		51	0.1947	0.4165	102	33.5332	33.5332
1	0.0123		52	0.2137	0.4532	103	35.3533	35.3533
2	0.0102		53	0.2340	0.4935	104	37.0868	37.0868
3	0.0093		54	0.2553	0.5392	105	38.7007	38.7007
4	0.0087		55	0.2758	0.5912	106	40.4388	40.4388
5	0.0082		56	0.2950	0.6498	107	42.6132	42.6132
6	0.0082		57	0.3147	0.7165	108	44.9015	44.9015
7	0.0073		58	0.3360	0.7918	109	47.3095	47.3095
8	0.0073		59	0.3615	0.8778	110	49.8432	49.8432
9	0.0073		60	0.3930	0.9757	111	52.5082	52.5082
10	0.0082		61	0.4342	1.0873	112	55.3105	55.3105
11	0.0088		62	0.4813	1.2120	113	58.2560	58.2560
12	0.0107		63	0.5355	1.3487	114	61.3505	61.3505
13	0.0148		64	0.5942	1.4992	115	64.6000	64.6000
14	0.0218		65	0.6577	1.6630	116	68.0097	68.0097
15	0.0318		66	0.7252	1.8367	117	71.5850	71.5850
16	0.0443		67	0.7993	2.0188	118	75.3288	75.3288
17	0.0575		68	0.8820	2.2137	119	79.2452	79.2452
18	0.0588	0.0588	69	0.9778	2.4268	120	83.3333	83.3333
19	0.0608	0.0615	70	1.0912	2.6670			
20	0.0620	0.0633	71	1.2253	2.9358			
21	0.0620	0.0653	72	1.3833	3.2300			
22	0.0607	0.0675	73	1.5655	3.5470			
23	0.0600	0.0700	74	1.7723	3.8783			
24	0.0600	0.0733	75	2.0015	4.2160			
25	0.0580	0.0740	76	2.2548	4.5555			
26	0.0507	0.0742	77	2.5370	4.8998			
27	0.0470	0.0735	78	2.8565	5.2568			
28	0.0462	0.0725	79	3.2260	5.6467			
29	0.0438	0.0730	80	3.6562	6.0855			
30	0.0428	0.0748	81	4.1420	6.5628			
31	0.0458	0.0788	82	4.6893	7.1530			
32	0.0493	0.0848	83	5.3228	7.8883			
33	0.0547	0.0920	84	6.0793	8.6960			
34	0.0635	0.1003	85	6.9545	9.6233			
35	0.0737	0.1098	86	7.9392	10.6732			
36	0.0847	0.1213	87	9.0623	11.8082			
37	0.0953	0.1343	88	10.3113	13.0255			
38	0.1038	0.1492	89	11.6595	14.2933			

39	0.1097	0.1680	90	13.0783	15.5807
40	0.1145	0.1873	91	14.5312	16.8525
41	0.1207	0.2070	92	15.9983	18.0965
42	0.1273	0.2255	93	17.4382	19.2777
43	0.1340	0.2420	94	18.7948	20.3492
44	0.1382	0.2545	95	20.2425	21.5038
45	0.1425	0.2693	96	21.9280	22.9070
46	0.1478	0.2877	97	23.7452	24.4408
47	0.1535	0.3078	98	25.6970	26.1150
48	0.1607	0.3303	99	27.7465	27.8985
49	0.1688	0.3553	100	29.7623	29.7623
50	0.1795	0.3842	101	31.6583	31.6583

Appendix B

Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance IUL1 2017 CSO – Unisex.xlsm," "Expense Allowance IUL1 2017 CSO – Unisex.pdf"

Appendix C

Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges IUL1 2017 CSO – Unisex.xlsm," "Surrender Charges IUL1 2017 CSO – Unisex.pdf"

Appendix D

Guaranteed Monthly Unit Loads per 1,000 Specified Amount
Insert "Unit Loads 2015 IUL – Unisex.xls"

Appendix E

Minimum Guaranteed Cash Value
Standard Nontobacco, $880 Annual Premium, Issue age 35, $100,000 Specified Amount
100% Fixed Account allocation

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$370	$0	$100,000
2	$735	$0	$100,000
3	$1,095	$0	$100,000
4	$1,453	$0	$100,000
5	$1,811	$11	$100,000
6	$2,171	$571	$100,000
7	$2,531	$1,131	$100,000
8	$2,892	$1,692	$100,000
9	$3,252	$2,152	$100,000
10	$3,615	$2,715	$100,000
11	$3,981	$3,281	$100,000
12	$4,349	$3,849	$100,000
13	$4,718	$4,418	$100,000
14	$5,088	$4,988	$100,000
15	$5,456	$5,456	$100,000
16	$5,820	$5,820	$100,000
17	$6,175	$6,175	$100,000
18	$6,516	$6,516	$100,000
19	$6,842	$6,842	$100,000
20	$7,152	$7,152	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:

- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

D. L. Kohlhaase

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David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

UNITED OF OMAHA LIFE INSURANCE CO.
ACTUARIAL MEMORANDUM
IUL – Unisex
Form D535LDC14P

I.   INTRODUCTION

Product Description: Flexible Premium Index-Linked Universal Life Insurance payable at death. Maturity is at age 120. The product's accumulation value is decreased by a percent of premium load, a per 1,000 of specified amount load, a per policy load and the cost of insurance charge. The accumulation value is increased by premiums paid and interest credited. There are multiple index-linked accounts and a fixed interest option from which the owner may choose to allocate premiums. Premiums will be allocated initially to a short term holding account which will receive interest at the same rate as the fixed interest account. On a sweep date, the premium will be allocated to the fixed interest and index linked accounts in proportions designated by the owner.

The guaranteed percent of premium load is 10.00%, the guaranteed per policy load is $10 per month and the guaranteed per 1,000 of specified amount rates and the guaranteed cost of insurance rates are detailed in Appendices D and A respectively. These loads are guaranteed for current issues. If a future change is made within the ranges listed in the Memo of Variability, a new actuarial memorandum will be supplied demonstrating compliance. On a current basis the loads are at or below the guaranteed rates and may be changed based on variety of factors including expectations of future investment earnings, persistency, mortality, expense experience, taxes and any other factors which we may determine to take into account in the future. Increases and decreases in specified amount that cause movements between bands would change the current cost of insurance and per 1,000 of specified amount rates.

Charges other than premium loads are distributed across the different segments and accounts on a pro-rata basis. The pro-rata amount is determined by the segment, short term holding account, and fixed interest account values at the time of the deduction in proportion to the total accumulation value. For purposes of calculating the net amount at risk, the accumulation value is determined by summing segment values, fixed interest accumulation value, and the short term holding account value.

Surrender charges will not change from those shown in Appendix C. Surrender charges are applied to the greater of the original specified amount or the current specified amount.

We credit fixed interest using a portfolio-year method. Credited interest is guaranteed to be not less than 2% for the fixed interest account and 0% for the index-linked accounts. Current credited fixed interest rates are set periodically and are based on a supportable rate that reflects the current anticipated earned rates and the product's targeted spread. Interest on Index Linked accounts are credited at the segment maturity date. The amount credited is the index value at the segment maturity multiplied by the segment index rate. The segment index rate being the following:

$$\frac{Index_{End\ of\ Segment} - Index_{Beginning\ of\ Segment}}{Index_{Beginning\ of\ Segment}} \times Participation\ Rate$$

The segment index rate is subject to the cap set at the beginning of the segment and floor set at issue.

This product incorporates a traditional cumulative no-lapse provision. Premiums paid less withdrawals accumulated at 2% less the loan value is compared to the applicable No-Lapse Premium accumulated at 2% to determine if the No-Lapse Protection continues. While the No-Lapse Protection is in effect, the policy will not lapse even if the cash surrender value is not positive.

No-Lapse Protection Guarantee Periods:
    No-Lapse Protection Guarantee Period: Minimum (10, Maximum (5, 85 – Issue Age))

Two types of loans are available. The first is a standard loan. When selected, the standard loan will require sufficient value within the fixed interest account to cover any loan amount. If there is insufficient value, the policy will transfer the necessary funds to the fixed account on a pro rata basis from the index account. The loan will be credited at the guaranteed interest rate of the fixed account and charged interest based on the schedule in the contract.

The second loan type is an indexed loan. This loan requires sufficient value be in the indexed accounts to accommodate the loan. If necessary, money will be moved from the fixed account to the indexed accounts based on current allocations to the next available segment. At segment maturities, interest will be credited in accordance with the indexed account return. The index loan will be charged interest at a declared rate set by the company but not to exceed the maximum rate set in the contract.

Issue Ages: 0-85 (preferred plus, preferred, standard plus issue ages are 18-80, nontobacco only for ages 0-17)

The minimum specified amount is $100,000 and the Current Cost of Insurance charges are banded at $100,000, $250,000, $500,000 & $1,000,000.

Definition of life insurance will be set based on the Cash Value Accumulation Test. There are two death benefit option types available, level and increasing.

Reserves and Cash Surrender Values: The reserves and cash surrender values for this policy have been set in accordance with the Universal Life Model Regulation adopted by the National Association of Insurance Commissioners in December, 1983.

II.   MORTALITY TABLES AND INTEREST RATES

The valuation mortality table is the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. The valuation interest rate is as prescribed in Valuation Manual, VM20, Sections 3.C.2.a and 3.C.2.b. Juvenile issues (ages 0-17) are allowed. Only nontobacco will be issued at the juvenile ages.

The nonforfeiture mortality table and the guaranteed maximum cost of insurance charges are the 2017 Commissioners Standard Ordinary Mortality Table, age last birthday, 80/20 Male/Female, Smoker and Nonsmoker. For attained ages less than 18, the composite table is used. For issue ages less than 18, using the Nonsmoker table for attained ages 18 and older provides nonforfeiture benefits that are at least as favorable as what would have been required had the composite table been used. For substandard cases, the appropriate rate is multiplied by (1 + number of tables / 4) not to exceed 1.00. The monthly charges are equal to 1/12 of the annual charges in the above table. The nonforfeiture interest rate for meeting the minimum cash surrender values under the UL Model Regulation is 2.0%. The guaranteed maturity values are based on the guaranteed mortality charges as shown in Appendix A and the guaranteed interest rate of 2.0%.

III.   STATUTORY RESERVES

Reserves are calculated as prescribed by the "Valuation Manual". The Net Premium Reserve held on the policy is based on VM-20 Section 3.

IV.   CASH VALUES

The NAIC UL model regulation defines the minimum cash value at any date as the accumulation to that date of premiums paid minus the accumulations to that date of (i) the benefit charges, (ii) the averaged administrative expense charges for the first policy year and any other insurance-increase years, (iii) actual administrative expense charges for other years, (iv) initial or additional acquisition expense charges not exceeding the initial or additional expense allowance, respectively, (v) any service charges actually made, and (vi) any deductions for partial withdrawals, minus any unamortized unused initial and additional expense allowance.

Because guaranteed charges are level over the entire life of the policy, the expense charge in year one will equal the average administrative expense charge. Therefore, the initial acquisition expense which is defined as the excess of the expense charges actually made in the first policy year over the averaged administrative expense charges, will be zero. Therefore, the unused initial expense allowance is equal to the full initial expense allowance.

IAEC = Initial Acquisition Expense Charge

$$= Charges_1 - \frac{\sum\limits_{2}^{20} Charges_t}{19}$$

Where Charges$_t$ = PercentOfPremLoad$_t$ * Prem$_t$ + (UnitLoad$_t$ * Units + perPolicyLoad$_t$)*12

Providing that no special requests requiring service fees and no partial surrenders have occurred, the definition of the accumulation value is reduced to the accumulation of net premiums paid minus the accumulations of (i) the benefit charges, (ii) the per month policy fee and (iii) the per 1,000 of specified amount load. Thus, the cash surrender value equals the accumulation value less a surrender charge, and satisfies the minimum requirement provided the surrender charge does not exceed the unamortized unused initial expense allowance.

The initial expense allowance is calculated based on a level death benefit equal to the face amount. This level death benefit will always be equal to or less than the true death benefit. Thus, this initial expense allowance is less than or equal to the maximum allowable initial expense.

E = Maximum initial expense allowance per $1,000 of initial face amount

P_x^{NNL} = the nonforfeiture net level premium per $1,000 for this

policy (endowment at age 100)

$$E = 10 + 1.25 \cdot \min\left[\frac{P_x^{NNL}}{40}\right]$$

The unamortized unused initial expense allowance during the policy year beginning on the policy anniversary at age x+t (where x is the issue age and t is the policy duration) is

$E \cdot \dfrac{a_{x+t}}{a_x}$, where a$_{x+t}$ and a$_x$ are calculated based on the guaranteed mortality charges displayed in Appendix A and valuation interest.

Due to guaranteed mortality charges differing by risk class, the unamortized unused initial expense allowances must differ by risk class. The allowances are displayed in Appendix B. The surrender charges displayed in Appendix C differ by risk class and are less than the unamortized unused initial expense allowances.

EXAMPLE

Assumptions: Age 35, Standard Nontobacco
$100,000 specified amount
guaranteed assumptions (e.g. 2.00% credited interest)
annual premium = $880

$$\text{IAEC} = \left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right] - \frac{\sum_{2}^{20}\left[880 \cdot .10 + (.1875 \cdot 100 + 10) \cdot 12\right]}{19} = 0$$

$$P^{NNL}_{35} = 12.82$$

$$E = 10 + 1.25 \cdot min \begin{bmatrix} 12.82 \\ 40 \end{bmatrix} = 26.02$$

$_t AV$ = Accumulation value at the end of year t

$_t CSV$ = Cash surrender value at the end of year t

$_t SC$ = Surrender charge for year t

$_6 AV = 2,171$

$_6 SC = 1,600$

$_6 CSV = {_6}AV - {_6}SC = 2,171 - 1,600 = 571$

$_6 SC^{max}$ = maximum allowable surrender charge in 6th duration based on E, for a $100,000 policy.

$$_6 SC^{max} = 100 \cdot E \cdot \frac{a_{x+t}}{a_x} = 100 \cdot 26.02 \cdot \frac{28.5126}{30.8410} = 2,602 \cdot .9245 = 2,406 > 1,600$$

D. L. Kohlhaase

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David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019

Appendix A
Guaranteed Cost of Insurance Charges
Monthly Per $1,000 Net Amount at Risk

AGE	Nont	Tob	AGE	Nont	Tob	AGE	Nont	Tob
0	0.0203		51	0.1947	0.4165	102	33.5332	33.5332
1	0.0123		52	0.2137	0.4532	103	35.3533	35.3533
2	0.0102		53	0.2340	0.4935	104	37.0868	37.0868
3	0.0093		54	0.2553	0.5392	105	38.7007	38.7007
4	0.0087		55	0.2758	0.5912	106	40.4388	40.4388
5	0.0082		56	0.2950	0.6498	107	42.6132	42.6132
6	0.0082		57	0.3147	0.7165	108	44.9015	44.9015
7	0.0073		58	0.3360	0.7918	109	47.3095	47.3095
8	0.0073		59	0.3615	0.8778	110	49.8432	49.8432
9	0.0073		60	0.3930	0.9757	111	52.5082	52.5082
10	0.0082		61	0.4342	1.0873	112	55.3105	55.3105
11	0.0088		62	0.4813	1.2120	113	58.2560	58.2560
12	0.0107		63	0.5355	1.3487	114	61.3505	61.3505
13	0.0148		64	0.5942	1.4992	115	64.6000	64.6000
14	0.0218		65	0.6577	1.6630	116	68.0097	68.0097
15	0.0318		66	0.7252	1.8367	117	71.5850	71.5850
16	0.0443		67	0.7993	2.0188	118	75.3288	75.3288
17	0.0575		68	0.8820	2.2137	119	79.2452	79.2452
18	0.0588	0.0588	69	0.9778	2.4268	120	83.3333	83.3333
19	0.0608	0.0615	70	1.0912	2.6670			
20	0.0620	0.0633	71	1.2253	2.9358			
21	0.0620	0.0653	72	1.3833	3.2300			
22	0.0607	0.0675	73	1.5655	3.5470			
23	0.0600	0.0700	74	1.7723	3.8783			
24	0.0600	0.0733	75	2.0015	4.2160			
25	0.0580	0.0740	76	2.2548	4.5555			
26	0.0507	0.0742	77	2.5370	4.8998			
27	0.0470	0.0735	78	2.8565	5.2568			
28	0.0462	0.0725	79	3.2260	5.6467			
29	0.0438	0.0730	80	3.6562	6.0855			
30	0.0428	0.0748	81	4.1420	6.5628			
31	0.0458	0.0788	82	4.6893	7.1530			
32	0.0493	0.0848	83	5.3228	7.8883			
33	0.0547	0.0920	84	6.0793	8.6960			
34	0.0635	0.1003	85	6.9545	9.6233			
35	0.0737	0.1098	86	7.9392	10.6732			
36	0.0847	0.1213	87	9.0623	11.8082			
37	0.0953	0.1343	88	10.3113	13.0255			
38	0.1038	0.1492	89	11.6595	14.2933			

39	0.1097	0.1680	90	13.0783	15.5807
40	0.1145	0.1873	91	14.5312	16.8525
41	0.1207	0.2070	92	15.9983	18.0965
42	0.1273	0.2255	93	17.4382	19.2777
43	0.1340	0.2420	94	18.7948	20.3492
44	0.1382	0.2545	95	20.2425	21.5038
45	0.1425	0.2693	96	21.9280	22.9070
46	0.1478	0.2877	97	23.7452	24.4408
47	0.1535	0.3078	98	25.6970	26.1150
48	0.1607	0.3303	99	27.7465	27.8985
49	0.1688	0.3553	100	29.7623	29.7623
50	0.1795	0.3842	101	31.6583	31.6583

Appendix B

Unamortized Unused Initial Expense Allowance
Insert "Expense Allowance IUL1 2017 CSO – Unisex.xlsm," "Expense Allowance IUL1 2017 CSO – Unisex.pdf"

Appendix C

Surrender Charge per 1,000 Specified Amount
Insert "Surrender Charges IUL1 2017 CSO – Unisex.xlsm," "Surrender Charges IUL1 2017 CSO – Unisex.pdf"

Appendix D

Guaranteed Monthly Unit Loads per 1,000 Specified Amount
Insert "Unit Loads 2015 IUL – Unisex.xls"

Appendix E

Minimum Guaranteed Cash Value
Standard Nontobacco, $880 Annual Premium, Issue age 35, $100,000 Specified Amount
100% Fixed Account allocation

Duration	Cash Accumulation Value	Cash Surrender Value	Death Benefit
1	$370	$0	$100,000
2	$735	$0	$100,000
3	$1,095	$0	$100,000
4	$1,453	$0	$100,000
5	$1,811	$11	$100,000
6	$2,171	$571	$100,000
7	$2,531	$1,131	$100,000
8	$2,892	$1,692	$100,000
9	$3,252	$2,152	$100,000
10	$3,615	$2,715	$100,000
11	$3,981	$3,281	$100,000
12	$4,349	$3,849	$100,000
13	$4,718	$4,418	$100,000
14	$5,088	$4,988	$100,000
15	$5,456	$5,456	$100,000
16	$5,820	$5,820	$100,000
17	$6,175	$6,175	$100,000
18	$6,516	$6,516	$100,000
19	$6,842	$6,842	$100,000
20	$7,152	$7,152	$100,000

Appendix F

CERTIFICATION OF COMPLIANCE

      In my opinion, the nonforfeiture values available under this policy equal or exceed the minimums required under Section 6A of the NAIC Universal Life Insurance Regulation, Model #585 for all ages, rate classes, and durations at which the policy is available.

      I have performed the analysis as detailed in the preceding memo, in accordance with all applicable actuarial Standards of Practice and Actuarial Guidelines, in support of this opinion as detailed in this actuarial memorandum. This analysis included:
- Review of Model Regulation #585
- Calculation of the maximum expense allowances as prescribed by Model Regulation #585
- Verification that the initial acquisition expense allowance is zero allowing that the unused initial expense allowance to equal the maximum expense allowance
- Verification that the surrender charges are less than or equal to the unamortized unused expense allowance in all durations

David L Kohlhaase, Jr. FSA, CERA, MAAA
Managing Actuary

October 1, 2019